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**An Investigation into Grade R Teachers' Experiences of  
Implementing Numeracy in Grade R**

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**Volume 1**

ELNA BARNARD

Submitted in fulfilment of the academic requirements for the degree of Doctor of Philosophy,  
in the Department of Education, Rhodes University

Supervisor: Professor M Schäfer

Grahamstown

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## Abstract

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This research study investigates how selected Grade R teachers implement numeracy in their classrooms, based on their experiences, personal beliefs and perceptions. This study adopts the view that a teacher's practice is not only informed on what she believes about her learners, but also on how she organises her classroom environment and her own teaching practice. However, the teacher cannot be divorced from the political and historical background of Early Childhood Development (ECD), as these factors have an impact on her numeracy implementation. Integrated in this research study is thus not only a comprehensive historical analysis of the historical and political background of ECD, but also an in-depth look at the complex curriculum road the Grade R teacher had to travel over the past twelve years.

The aim of this case study is to understand and describe what is happening in Grade R classrooms when numeracy is implemented, as well as identifying possible barriers which Grade R teachers may experience in implementing numeracy.

The author utilized an adapted Interactive Qualitative Analysis Framework to explore Grade R teachers' views and experiences. Open-ended focus group interviews were used to develop a framework for individual interviews. This interview framework guided the data collection of nine audio-video tapes of classroom activities and nine semi-structured individual interviews. Analysis of the individual interviews revealed each teacher's understanding as well as her perceptions and needs regarding the implementation of numeracy in her

classroom. The transcriptions of the individual interviews were compared to the audio-video tapes of what happened in each classroom. This was done in order to determine whether the teachers' practices were consistent with what they said in the interviews. Paradoxes and inconsistencies were documented.

The historical and political analysis of ECD illustrates the complex development of ECD in South Africa over the last few decades. It therefore also highlights and brings to the fore the complex journey that Grade R teachers had to navigate in adapting their practice to ever changing curriculum requirements.

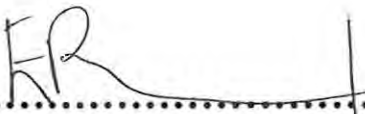
The empirical results show that there are inconsistencies between what selected teachers know and believe, and what they are implementing. However, "silent themes" which did not come to the fore in the focus group or individual interviews, were identified in the audio-video tapes of classroom activities. Also, many "silent themes" indicate that there are numerous concerns, such as lack of proficiency in bridging the gap between theory and practice, regarding the implementation of numeracy in Grade R.

It was found that many of the selected Grade R teachers struggle to implement numeracy in their classrooms, as they lack the skills and support to teach numeracy in a Grade R context.

## DECLARATION

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I declare that “An Investigation into Grade R Teachers’ Experiences of Implementing Numeracy in Grade R” is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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**E BARNARD**

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**DATE**

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## 1.1 INTRODUCTION

The *Grade 3 Systemic Evaluation 2001 Mainstream Report* (South Africa. Eastern Cape Department of Education [ECDoE], 2002) expressed serious concerns regarding levels of numeracy among Grade 3 learners. According to its findings (South Africa. ECDoE, 2002), only 33% of Grade 3 learners were numerate in 2002. A second Grade 3 Systemic Evaluation was conducted during 2008, and although there was a slight increase to 35%, the findings again indicated that about two-thirds of Grade 3 learners were neither literate nor numerate (South Africa. Department of Basic Education [DoBE], 2008b).

In reaction to the disastrous results of the above-mentioned systemic evaluations, the government set targets

for improvement in learner achievement by 2014. The Minister has set a target of improving numeracy and literacy attainment levels of grades 3 and 6 from the current average attainment levels of between 27% and 38% to at least 50% by 2014 (South Africa. Department of Basic Education [DoBE], 2010c, p. 8).

The situation demands that three pertinent questions be asked:

- 1) Why are only a third of Grade 3 learners numerate?
- 2) Can this low numeracy level be attributed, at least in part, to inadequate skills and knowledge development among Reception Year (Grade R) learners?

- 3) Whether Grade R teachers have sufficient skills and knowledge to implement numeracy in Grade R classrooms? It is with the latter two questions that this research project is concerned.

### 1.1.1 Question 1

Why are only a third of Grade 3 learners numerate? The situation was revealed in the findings of the two *Grade 3 Systemic Evaluation Reports* (South Africa. Department of Education [DoE], 2003a, South Africa. DoBE, 2008a), which were conducted to determine the impact of implementing new curricula. The 2001 Grade 3 Systemic Evaluation was conducted after the introduction of the *Statement of the National Curriculum for Grades R-9* (South Africa. Department of Education [DoE], 1997b) or Curriculum 2005, as it was commonly referred to. The second Grade 3 Systemic Evaluation focussed on the *National Curriculum Statement* or NCS (South Africa. Department of Education (DoE), 2002b), and required Grade 3 learners to demonstrate their abilities and competence whilst making use of a pencil and worksheet (South Africa. DoBE, 2008b).

It is important to bear in mind the history of Foundation Phase curriculum development in South Africa. Prior to the implementation of Curriculum 2005, Foundation Phase teachers implemented syllabi which were prescribed by the fragmented provincial and homeland Departments of Education in apartheid South Africa.

Then, during a period of only ten years, Foundation Phase teachers (including Grade R teachers) had to make significant curriculum paradigm shifts on two occasions. Teachers were expected, in 1998, to implement a new curriculum quite different from what they had been teaching. Four years later, another curriculum, namely the NCS, was introduced, and teachers had to adapt their classroom preparation and teaching methodologies once again to accommodate the curriculum requirements. All this change and adaptation led *inter alia* to teachers focussing on the administration of the curriculum rather than on teaching and learning. *The Report of the Task Team for the*

*Review of the Implementation of the National Curriculum Statement* (South Africa. DoBE, 2009) makes it clear that teachers spent excessive time on planning and administration, which resulted in less time being devoted to teaching (pp. 26-27). In order to bring the focus back to teaching learners reading, writing and arithmetic, the Department of Education embarked on a Foundations for Learning Campaign during 2008: “*The Foundations for Learning Campaign* is a four year campaign to create a national focus to improve the reading, writing and numeracy abilities of all South African children” (South Africa. Department of Education, [DoE], 2008b, p. 4).

Chapter 2 of this study, which is divided into pre- and post-1995 sections, emphasizes the political and historical context of numeracy and describes the policies and documents that have been issued since 1995. The teacher cannot be divorced from the political and historical backgrounds of ECD: since 1995, numbers of curriculum policies, White Papers and other ECD documents have been issued by the government, and these have had a serious impact on how Foundation Phase teachers teach numeracy in their classrooms.

Chapter 3 deals intensively with the requirements of both Curriculum 2005 and the NCS, and how these have influenced Grade R teachers’ planning and preparation for teaching and learning activities in their classrooms over the past twelve years.

### **1.1.2 Question 2**

According to the *Education White Paper 5 on Early Childhood Education* (South Africa. Department of Education [DoE], 2001), not all young learners are exposed to early childhood education: it was found that only “1 million of an estimated 6 million children in the 0-6 years age are ... enrolled in some type of ECD provision” (p. 18). *The Systemic Evaluation Foundation Phase Mainstream National Report* (South Africa. DoE, 2003a) emphasized the importance of young learners being exposed to developmental activities prior to Grade 1, in order for them to perform adequately in

formal schooling (p. 18). The *Education White Paper 5* (South Africa. DoE, 2001) points out that

The early years are also critical for the acquisition of the concepts, skills and attitudes that lay the foundation for lifelong learning. These include the acquisition of language, perception-motor skills required for learning to read and write, **basic numeracy concepts and skills**, problem-solving skills and a love of learning. With quality ECD provision in South Africa, educational efficiency would improve, as children would acquire the basic concepts, skills and attitudes required for successful learning and development prior to or shortly after entering the system, thus reducing their chances of failure. (pp. 11-12)

An important question arises: are Grade R learners sufficiently exposed to numeracy knowledge and skills development? The *RNCS Grades R-9 Policy for Mathematics* (South Africa. Department of Education (DoE) 2002a) insists on the fact that learners in the Foundation Phase, especially Grade 3 learners, need to acquire Learning Outcomes by the end of their last year in the Foundation Phase, namely Grade 3 (pp. 21-31). In order to achieve these Learning Outcomes, grade specific Assessment Standards are stipulated, which describe “the level at which learners should demonstrate their achievement of the various Learning Outcomes” (South Africa. DoE, 2003b, p. 9). Thus, the *Mathematics Learning Area Statement* (South Africa. DoE, 2002a) “stipulate[s] the concepts, skills and values to be achieved on a grade by grade basis” (p. 2). It has five Learning Outcomes and 25 Assessment Standards for Grade R, and forms the core of the Numeracy Learning Programme. But the Department of Education has also introduced numeracy milestones, within the *Foundations for Learning Assessment Framework Foundation Phase* (South Africa. DoE, 2008c), that learners need to reach in order to develop their literacy and numeracy skills (pp. 3-16). Numeracy milestones have also been introduced for Grade R learners (South Africa. DoBE, 2010a, pp. 12-14).

In Chapter 3, Curriculum 2005, the NCS and the newly proposed CAPS (South Africa. Department of Basic Education [DoBE], 2010e, South Africa. Department of Basic Education [DoBE], 2010f ) are teased out in detail in order to gain an understanding of the numeracy knowledge and skills that Foundation Phase learners, especially Grade R learners, need to be exposed to.

### **1.1.3 Question 3**

The third question that needs to be asked is whether teachers, who are expected to lay the foundation in Grade R, are sufficiently equipped to implement numeracy in Grade R classrooms. The insistence in the *White Paper 5* (South Africa. DoE, 2001) that all learners, who begin their formal school career, should have attended a reception year class by 2010, makes it pivotal to look at the readiness, willingness, skills and knowledge of Grade R teachers to teach numeracy in their classes (p. 8).

Before a Grade R teacher can implement numeracy in her class, she needs to have an understanding of how a Grade R learner learns and acquires knowledge and skills. This thesis will analyse how four learning theories – namely, the neuro-science of learning, behaviourism, constructivism and multiple intelligences – can play a role in understanding and enhancing the implementation of numeracy in the Grade R classroom. Chapter 4 deals intensively with the different learning theories and their application to the curriculum and its implementation in the Grade R classroom.

Although the focus of this research study is not to investigate why Grade 3 learners are performing poorly in numeracy *per se*, it is necessary to ask these three questions in order to investigate possible reasons for the findings reported by the two systemic evaluations referred to above. This study aims to identify some of the root causes of the low numeracy levels of Grade 3 learners, and assess whether an appropriate foundation in numeracy is laid in Grade R.

## 1.2 CONCEPTUAL BACKGROUND TO THE RESEARCH

### 1.2.1 Confusion in teaching numeracy in Grade R

This research study focuses on the experiences of both professionally qualified teachers and Early Childhood Development (ECD) practitioners (“non-formally trained individuals providing an educational service in ECD”) in teaching numeracy in Grade R (South Africa. DoE, 1996a, p. 3). The *Interim Policy* (South Africa. DoE, 1996a) describes ECD as “an umbrella term which applies to the processes by which children from birth to at least nine years grow and thrive, physically, mentally, emotionally, spiritually, morally and socially” (GLOSSARY, p. 1).

In my capacity as a subject advisor for the Foundation Phase and ECD, I have noticed that professionally qualified teachers as well as ECD practitioners are experiencing confusion regarding what, how and when to teach numeracy in the daily programme of Grade R. The *Baseline Study Report* (South Africa. ECDoE, 2008a) reveals that “the quality of learning and teaching in 250 Reception Year classrooms ... [is] exceptionally low” (p. 96).

The *Report of the Task Team for the Review of the Implementation of the National Curriculum Statement* (South Africa. DoE, 2009) states that the frequency of change has left many teachers bewildered:

Our recent curriculum history has been characterized by radical change within a relative short period. The result has been a high level of confusion amongst teachers around what they are expected to do. These past changes have left tracks in teachers’ current understandings and practice, particularly tracks of *Curriculum 2005*. (p. 24)

The historical and political context of numeracy in ECD sites has an impact on how numeracy is taught in Grade R. Prior to 1995, there was no fixed curriculum for pre-primary schools advocating a formal numeracy approach (Grobler, Calitz, Van Staden & Orr, 1992, De Waal, Behm, Daniel, Morris, Scholtz & Thompson, 1993). The focus was on discovering, exploring and experimenting with numeracy concepts such as measurement, shapes, patterns and counting, through play activities and concrete experiences (Faber & Van Staden, 1997, p. 105).

In 1996 the *Interim Policy for ECD* (South Africa. DoE, 1996a) was published by the Department of Education. This document recommended that:

A wide range of activities needs to be provided to assist the development of children's mathematical concepts, and their understanding and appreciation of relationships and pattern in number, time and space in their everyday lives. (South Africa. DoE, 1996a, *APPENDIX 2*, p. 9)

It stated that the teaching approach should be informal, and that

Programmes should focus more attention on "hands-on" experiences, the use of manipulative materials, questioning, justification of thinking and problem-solving approaches. Less time should be spent on rote practice and memorisation, one answer and one method, the use of worksheets and teaching by telling. (SA: 1996a, *APPENDIX 2*, p. 5)

During 1997 and 1998, Foundation Phase teachers were exposed to Curriculum 2005 in-service training, but no guidance regarding mathematical content or teaching approach was given to Grade R teachers.

Four years later the NCS (South Africa. DoE, 2002b) was introduced as an adapted curriculum. Again in 2004 Foundation Phase teachers, including Grade R teachers, received training in how to implement the NCS. Although the NCS clearly specifies the learning outcomes and assessment standards applicable to the Grade R learner, no particular content knowledge and skills or teaching methodology are recommended (p. 14). However, the NCS (South Africa. DoE, 2002b) prescribes an allocation of 35% of teaching time per day for numeracy activities in the Foundation Phase (p. 17).

During January 2010, the Minister of Basic Education launched the *Foundations for Learning Assessment Framework for Grade R* in order to assist teachers in planning for numeracy learning activities for each term (South Africa. DoBE, 2010a). This Framework, with its focus on numeracy milestones which need to be achieved by Grade R learners, “organises the Assessment Standards contained in the National Curriculum Statement into manageable ‘sections’. This will help you with your planning and will structure your learners’ learning” (South Africa. DoBE, 2010a, p. 1).

However, during September 2010, the Department of Basic Education (South Africa. DoBE, 2010e) circulated the draft *Curriculum Assessment Policy Statement (CAPS)* for inputs by the teaching fraternity. The Grade R draft CAPS document (South Africa. DoBE, 2010e) proposes a daily programme which integrates numeracy activities throughout the day. Targeted time slots for focussed or teacher-directed and planned numeracy activities for the whole class, for approximately 30 minutes per day, are also indicated. The numeracy activities are based on the five Mathematics Learning Outcomes of the NCS (South Africa, DoE, 2002a), namely Numbers and Number Operations, Space and Shape, Measurement, Patterns and Functions, and Data Handling (South Africa. DoBE, 2010e).

Prior to the launch of the *Foundations for Learning Assessment Framework for Grade R* (South Africa. DoBE, 2010e), only vague guidelines were provided by the government regarding how to teach numeracy in Grade R. This caused uncertainty among teachers, and many of them have consequently followed commercially bought learning and teaching support programmes, which advocate a more formal and

worksheet approach toward enhancing numeracy skills. The *Systemic Evaluation Foundation Phase Mainstream National Report* (South Africa. DoE, 2003a) has also highlighted that some teachers do not feel sufficiently confident to implement the curriculum, despite undergoing training (p. 69). Faber and Van Staden (1997) argue that commercially bought learning materials often do not take cognisance of the young learner's prior experience of mathematical concepts, knowledge, skills and attitudes and "tend to reduce autonomy: teachers decide on the problems, how many are to be tackled and when, and whether the answers are right or wrong" (p. 109).

Sawyer (1995) adds that a high standard of planning and teaching depends upon "good quality resources for teachers and children, whether these be published schemes, resource books or apparatus" (p. 141). In order to counteract teachers' lack of confidence in teaching mathematics, Sawyer (1995) stresses the importance of rendering excellent in-service training and continuing support, "so that their knowledge and understanding base and their confidence in teaching mathematics can be improved" (p. 203). Sawyer (1995) points out that the feelings and concerns of teachers regarding "unfamiliar content, new teaching and assessment strategies, the amount of required paperwork and record keeping, and increasing pressures and resultant stress," cannot be ignored (p. vii). The over-reliance on workbooks in the teaching of mathematics is a reflection of teachers' insecurities regarding content (Sawyer, 1995, p. 141).

In contrast, other Grade R teachers opt to follow a *laissez-faire* approach – let the children learn through play – without the teacher being actively involved in constructing and channelling these play activities. Sheffield and Cruikshank (2000) make it very explicit that "...activities cannot by themselves teach. Augment them with reading, writing, discussion, examples, and thought" (p. 356).

Kirov and Bhargava (2002) argue that the informality of high-quality learning in the preschool years does not imply that planning for mathematics is redundant. Instead of letting learners play without interference or guidance from their teachers, Kirov and Bhargava (2002) urge teachers to provide mathematics learning opportunities that will

stimulate active learning and the use of rich mathematical language. Learners should give answers to “what?” “how?” and “why?” questions (Kirov & Bhargava, 2002, unpaginated).

According to Golbeck (2002) teachers should not experience confusion or frustration in implementing numeracy in their classrooms if they plan “developmentally appropriate practices” (unpaginated). This will provide the teacher with clarity both on the content that needs to be taught, and on her role in teaching this content.

During in-service training for the NCS (South Africa. DoE, 2002b), it was emphasized that the teacher needs to be able to explain and devise learning programmes and learning material resources (p. 9). Outcomes-Based Education, as a principle of the NCS (South Africa. DoE, 2002b), emphasizes

participatory, learner-centred and activity-based education. They [learning outcomes and assessment standards] leave considerable room for creativity and innovation on the part of teachers in interpreting what and how to teach. (p. 12)

A Grade R teacher therefore has a big responsibility to develop and implement a Numeracy Learning Programme that is developmentally appropriate and states “beforehand what the learners are expected to achieve” (South Africa. DoE, 2002a, p. 94).

### **1.2.2 The rationale for teaching Numeracy in Grade R**

In order to implement a good quality Numeracy Learning Programme, the Grade R teacher needs to understand the rationale for teaching numeracy in Grade R. The NCS (South Africa. DoE, 2002a) emphasizes that the purpose and/or rationale of mathematics is to enable a person “to contribute and participate with confidence in

society” (p. 4). However, before a person can participate confidently in her social milieu, she needs to be taught and exposed to opportunities where she can practise this participation. The Numeracy Learning Programme, with its mathematical learning outcomes and assessment standards, provides a framework in which such participation can be experienced. The mathematical rationale in Grade R focuses on the development of number concept, patterns, space and shape, and data handling (South Africa. DoE, 2002a).

The draft *CAPS for Mathematics in the Foundation Phase* (South Africa. DoBE, 2010f), is built on the above-mentioned NCS rationale. The CAPS (South Africa. DoBE, 2010f) promotes a curriculum that

gives expression to what is regarded to be knowledge, skills and values worth learning. It will ensure that learners acquire and apply knowledge and skills in ways that are meaningful to their own lives. In this regard, the curriculum promotes the idea of grounding knowledge in local contexts, while being sensitive to global imperatives. (p. 3)

According to the draft CAPS for mathematics in the Foundation Phase (South Africa. DoBE, 2010f), the aim of mathematics is to ensure that learners will be confident and competent in mathematical situations (p. 6). It aims further to equip learners with “deep conceptual understandings in order to make sense of Mathematics,” as well as ensure that they are able to demonstrate the necessary mathematical competence, knowledge and skills (South Africa. DoBE, 2010f, p. 6). Grade R teachers therefore need to implement a content area consistent with the NCS Mathematical Learning Outcomes (South Africa, DoE, 2002a). The content area consists of:

- Numbers, Operations and Relationships,
- Patterns, Functions and Algebra,
- Space and Shape (Geometry),

- Measurement and
- Data Handling Phase. (South Africa. DoBE, 2010f, p. 8)

The draft CAPS for Mathematics in the Foundation Phase (South Africa. DoBE, 2010f) emphasises that “Teaching in a Grade R set-up is **INFORMAL** but with a structured daily programme to create a set-up of ‘play with a purpose’” (p. 6).

Only when the teacher is knowledgeable regarding the meaning of the relevant mathematical concepts, and knows which mathematical concepts and skills she wishes the young learner to understand and master, will she be able to provide learners with significant learning and teaching opportunities. It is important that the teacher takes into cognizance the developmental level of learners as well as their interests when she plans meaningful learning experiences (Kirov & Bhargava, 2002). According to Kirov and Bhargava (2002) it is important to permit

children time for free play that enables them to explore mathematical concepts. While children are engaged in an activity, the teacher can observe and then become active in guiding their learning. This interaction will help the children's progress from behavioural to representational understanding of mathematical concepts. (unpaginated)

### **1.2.3 Teachers’ beliefs, experiences, knowledge and feelings regarding how young children learn mathematics**

One reason why current pre-school programmes may not be capitalizing on the young learner’s prior mathematical knowledge may be associated with teachers’ beliefs, experiences, knowledge and feelings regarding how young children learn mathematics. In this study, the concept of teachers’ beliefs refers to teachers’ views of how learning should take place in a Grade R classroom whilst experiences as a concept, refers to Grade R teachers’ encounters of teaching numeracy. The concept of knowledge refers to the teachers’ understanding and comprehension of numeracy information, data and

facts. The concept of feelings can be described as Grade R teachers' emotional and affective reactions regarding their teaching of numeracy.

According to Sheffield and Cruikshank (2000), there is a direct correlation between the teacher's beliefs, thus her opinion of how children should learn and the children's performance. Two viewpoints are held: some maintain that young learners "must be left alone, to grow and develop with little interference from adults, and others believe that children must be closely watched and directed" (Sheffield & Cruikshank, 2000, p. 29). Sheffield and Cruikshank (2000) are of the opinion that the

overall degree of teaching success depends more on what teachers believe about children than on how they organize to teach them, because teachers interact with children in ways that reflect their beliefs about children. (p. 29)

Sheffield and Cruikshank (2000) urge educators to explore how reception year learners learn mathematics. They argue that once educators comprehend the characteristics and stages of mathematical learning, young learners will "receive the kind of instruction most appropriate to their individual learning styles" (Sheffield & Cruikshank, 2000, p. 9). Sheffield and Cruikshank (2000) remark that an educator's job is to determine how children think about numbers. Therefore,

You are challenged to build on what children bring to the classroom and provide activities that help children further grow and develop their mathematical thinking and their understanding of the concepts of addition and subtraction. (Sheffield and Cruikshank, 2000, p. 154)

Campbell (1997) echoes this appeal for teachers to build on the thinking of learners, because this will make the learning significant to them (p. 24).

Instruction must build on children's existing ideas, so that the children will construct progressively more advanced understandings and simultaneously perceive mathematics as "making sense". It is important for each child to confidently think, reason, and explain mathematically. Eventually this understanding should be consistent with established standards for mathematics. Therefore, instructional practice cannot proceed without considering both mathematical content and children's current understandings. (Campbell, 1997, p. 24)

Chambers (2002) is also of the opinion that teachers need to build on learners' informal strategies. According to him, "young children solve mathematical problems by directly modelling the action or relationship described in the problem. They do not need to be taught how to use direct-modelling strategies, nor do they need such often-assumed prerequisite knowledge as number facts or computational algorithms" (Chambers, 2002, p. 12).

Campbell (1997) stresses the important factor that all young learners need to be actively engaged, participating in classroom discussions and investigations and being required to contribute and explain. There must be a move from the long-established habitual approach to mathematics instruction where the teacher merely demonstrates and explains to the learners, to a constructivist teaching approach, where the teacher asks what young learners think and "why ... they think the way they do?" (Campbell, 1997, p. 24). If the teacher takes cognizance of how learners learn and think, she will be able to build on their understanding and construction of mathematical meanings.

Anghileri (1995) and Gurney (1997) stress the significance for young learners to discuss mathematical concepts with their classmates, as they are not only constructing their knowledge when they talk about it but are also being exposed to various ways of thinking and learning about mathematics (Anghileri, 1997, p. xiv). Gurney (1997) points out that young learners will not be able to develop their conceptual understandings if they are not using appropriate mathematical language to do so (p. 6).

Loef, Carey, Thomas, Carpenter and Fennema (1988) highlight the importance of the teacher knowing the solution strategies that young learners use when addressing a problem in order “to design instruction that builds on children’s knowledge” (p. 33). “Assessing children’s thinking and knowing the processes that individual children use to solve problems are essential aspects of a program that focuses on problem solving. Once teachers know how pupils solve problems they can then use this information to determine the sequence of their instruction” (Loef, et al., 1988, p. 34).

Silver and Smith (1990) advocate a mathematics curriculum in which the learning of basic skills is integrated with thinking, problem solving and reasoning. High-level thinking among learners can be triggered off by the teacher asking them open-ended questions as well as creating opportunities for them to discuss multiple solution methods for mathematical problems (Silver & Smith, 1990, pp. 65-66).

However, Grouws and Good (1989) have found that problem-solving lessons are scarce. If they do occur, the problem solving is based on a section of the “textbook that deals with verbal problems” and requires only that the learner “select a computational operation” (Grouws & Good, 1989, p. 60). Grouws and Good (1989) maintain that enough time must be granted to learners to discuss problems with one another and to describe their own attempts at solving a problem (p. 62).

The Grade R teacher must be enthusiastic and excited about teaching mathematics. It is important for both young learners and their teachers to be intellectually and emotionally involved in the teaching and learning process (Schwartz & Riedesel, 1994, p. 2). The “attitude toward mathematics and the enthusiasm for teaching mathematics that the teacher brings to the class greatly affect children’s confidence” (Schwartz & Riedesel, 1994, p. 12). The teacher’s main role should be that of a motivator and facilitator, thus guiding learners to expand their mathematical knowledge through the discovery of different strategies for solving a problem. The teacher guides a learner who is not able to solve a problem with a question or comment designed to provide

insight. Schwartz and Riedesel (1994) are strong believers in introducing new concepts with concrete material, and then working up to the stage of abstract thinking:

Paper and pencil mathematics should be reduced. Emphasis should be placed on orally presented problems, computations, and challenges. “Hands-on,” interactive displays should be an integral part of the classroom as well as proper use of manipulatives such as Unifix cubes, Cuisenaire rods, geoboards etc. (Schwartz & Riedesel, 1994, p. 18)

Schwartz and Riedesel (1994) are also of the opinion that a young learner should be able to resolve challenges before he/she can calculate and work out a mathematical answer (p. 18). Therefore the teacher needs to adapt her teaching strategies in order to make provision for problem-solving activities.

In other words, straight drill and practice/rote memorization of formulas, without a clear understanding of the concepts, is absolutely unacceptable. Vocabulary/terminology (e.g. perimeter) should follow problem solving. Emphasis should be placed upon various techniques/ways of solving things so the student does not get discouraged if s/he cannot solve the problem or computation in a particular way. It is helpful if the student knows that there is more than one correct way to arrive at an answer, then; rather than hastily “giving up”, the child will persevere (Schwartz & Riedesel, 1994, p. 18).

In sum, teachers need to build on young children’s informal knowledge when numeracy is being introduced in Grade R. They need to organize the Grade R classroom to support and encourage meaningful mathematics learning, and to integrate the learning of basic skills with thinking, problem solving and reasoning. Grade R teachers need to ask open-ended questions and create opportunities for learners to discuss multiple solution methods for mathematical problems. They should present

mathematical activities according to the learner's pace of learning, and focus more on the process than on the product. A learner-centred approach should be implemented, in terms of which learners participate actively, contribute and explain in classroom discussions their investigations and how they solve problems. Chapter 4 provides an extensive literature review regarding learning theories and how these relate to the current curriculum. It also offers guidelines to assist teachers in the implementation of numeracy in Grade R.

### **1.3 RESEARCH PROCESS**

Chapter 5 deals with the research orientation, paradigm and modes of inquiry. It includes discussion of the research question and the aims of the study, as well as an in-depth look at its research design, data collection and analysis methods, before concluding with a critical evaluation of the research design.

#### **1.3.1 Research Question**

Against the backdrop of educational reform in South Africa, extensive curriculum change as well as the complex historical context, the following research question is asked:

- What are the experiences of selected teachers of teaching numeracy in Grade R?

In order to contextualise the empirical investigation of teachers' experiences and challenges in teaching numeracy the following sub-questions will also be addressed:

- What are the challenges that face Grade R teachers when they implement numeracy? and
- How do teachers' experiences regarding numeracy influence and affect their teaching strategies in numeracy?

### 1.3.2 Research Design

- ***The Research Paradigm***

This research study is underpinned by the naturalistic interpretive paradigm, as it focuses on trying to understand and interpret teachers' experiences of teaching numeracy in Grade R (Henning, et al., 2004, p.16). The naturalistic paradigm is anchored in qualitative research. This study intends to provide "thick description" of the perceptions, feelings, beliefs and values of Grade R teachers in teaching numeracy.

In this case study, I have adapted as a mode of interactive qualitative inquiry the "Interactive Qualitative Analysis: A Systems Method for Qualitative Research" or (IQA), from Northcutt & McCoy (2004). The case study is descriptive and interpretative in nature.

- ***The naturalistic interpretive paradigm***

I chose to work within the interpretive paradigm as this paradigm enabled me to listen to, observe and describe the feelings, thoughts and actions of Grade R teachers (Henning, et al., 2004, p. 3). The case study lends itself to an interpretive approach, with its emphasis on the subjectivity and personal involvement of the researcher in a small-scale research study aiming to obtain an understanding of the actions of Grade R teachers in their classroom environments and their social interactions with their learners (Cohen, et al., 2000). Although I was subjectively involved in the research study, the data collection strategies of observation, unstructured open-ended focus groups and semi-structured individual interviews enabled me to listen to, capture and describe the research phenomena in a reasonably objective way. I use the words of the participants, verbatim, without interfering editorially and in this way manipulating events (Cohen, et al., 2000, p. 22).

- ***Participant Selection***

The sampling strategy that has been followed in this research study is non-probability convenience and purposeful, criterion case sampling (McMillan & Schumacher, 2001, Cohen, et al., 2000). Due to the fact that the research study is embedded in a naturalistic interpretive research design paradigm, it is not intended to be representative and generalisable to the wider Grade R population. Rather, the aim is to gain an in-depth understanding of what Grade R teachers' experiences are, when they implement numeracy, and as it occurs in the three different models of ECD provisioning.

I purposefully selected ~~sixteen~~ Grade R educators and Grade R practitioners to participate in this research study, in order to collect data that is rich and inclusive and provides a holistic and comprehensive picture of the experiences of teachers when they implement numeracy in Grade R.

### **1.3.3 Data Collection**

Data was collected and analysed in three groups, entailing five stages.

Group One consisted of data obtained from a pilot research study, in which the Interactive Qualitative Analysis Systems Method Framework (IQA) of Northcutt & McCoy (2003) was tested and adapted. Group Two consisted of data that was collected and analysed from participants teaching in the Coastal Group A environment. In order to ensure that the data collection and analysis were comprehensive and rich, the research study was extended to include Group Three, which consisted of data from participants in Coastal Group B.

- The first stage of the research flow referred to the process of articulating the main purpose of the research study, namely to explore, describe and understand teachers' experiences of teaching numeracy in Grade R.

- The second stage entailed an unstructured open-ended focus group interview which was used to compile the interview framework for stage four.
- The third stage entailed the audio-video taping of the daily programme activities in the classroom. The aim of the audio-video tape observations was to record how numeracy was implemented in the Grade R classroom.
- The fourth stage of the research flow consisted of semi-structured open-ended interviews.
- The fifth and final stage of the research process consisted of the reporting of findings.

#### **1.4 DATA ANALYSIS & FINDINGS**

Before I could embark on the process of data analysis, I had to manage the data by transcribing the data collected from the three unstructured open-ended focus group interviews, nine semi-structured individual interviews and nine audio-video tapes of classroom activities. Once the data was transcribed and filed into electronic folders, I embarked on data analysis. By managing the data in a transcribed format, I was able to make use of narrative descriptions to tell how Grade R teachers implement numeracy and what these teachers experience, feel and believe when they are in their classrooms.

Data analysis consisted of two procedures, namely extracting coding themes and identifying patterns. In analysing the data, I used John Stuart Mill's Analytic Comparison as a technique to identify patterns amongst the themes (Neuman, 1997, p. 428). Mill's Analytic Comparison consists of the "Method of Agreement" and the "Method of Difference" (Neuman, 1997, p. 428). The Method of Agreement indicated that there were three categories, consisting of seventeen themes, present in all the

descriptive narratives. I have labelled these categories Barriers, Classroom Activities and Teachers' Experiences.

By using The Method of Difference to compare the transcripts of the individual interviews with the transcriptions of the audio-video tapes, I found that a new pattern, namely "silent themes" came to the fore. A silent theme is a theme which was not identified during the focus group or individual interview analysis, but became prominent when I analysed the transcriptions of the audio-video tapes. Six "silent themes" were identified in the nine transcripts of the audio-video tapes of classroom activities.

Reflection on the six silent themes revealed that they tended to be negative. Neuman (1997) describes "things that are *not* in the data" as "Negative Evidence" (p. 435); but in the context of this study I disagree with his perspective. While the six silent themes may have revealed weaknesses in Grade R classrooms, to identify a weakness does not preclude improving or even rectifying matters. The term "silent theme" indicates that the teacher was unaware of the impact of this aspect of her behaviour and actions in the classroom. The silent themes point to the need for further training to address the lack of skills on the part of teachers in seven of the classrooms.

The findings of the data analysis provided answers to the research question and sub-research questions, which are discussed in Chapter 5. In summary, it was found that the Grade R participants in this study have a theoretical knowledge and understanding of what ECD and Grade R entail. (See paragraph 6.4). The *Baseline Study Report* (South Africa. ECDoE, (2008a) echoes this finding:

**ECD practitioners** in general knew what they are required to do as a result of the qualification programmes they had attended during this study. (p. 9)

In Chapter 7 the conclusion is drawn that Grade R teachers are generally knowledgeable about teaching at the Grade R level, based on the results of the open-ended focus group interviews and the semi-structured individual interviews reported in Chapter 6. This finding is consistent with the *Baseline Study Report* (South Africa. ECDoE, (2008a), which states that “[t]he research shows that the practitioners know what their roles and responsibilities are” (p. 90).

However the challenges which Grade R teachers experience when they implement numeracy are:

- teacher-centeredness,
- a lack of going beyond the minimum requirements of the assessment standards,
- limited open-ended questions which made an appeal to learners’ creative, thinking, reasoning and problem-solving skills,
- absence of developmentally appropriate practices,
- limited opportunities for learning through play and
- a lack of organizing and managing the Grade R class to enhance numeracy skills.

These challenges indicated that seven teachers need to undergo further training regarding planning, organizing and managing classroom activities to enhance numeracy development by young learners.

The impact of Grade R teachers’ experiences regarding numeracy on their teaching strategies revealed that teachers were frustrated by the prescribed method of planning, and, in one case, discipline problems. This frustration impacted negatively on the planning, preparation and provision of numeracy activities in classrooms. Most of the Grade R teachers in the case study focussed on the completion of worksheets. There was a general absence of the implementation of numeracy concepts and skills in a hands-on way. Only in two classrooms was creativity, thinking, reasoning and problem-solving skills encouraged. The teachers in these two classroom environments were the only teachers in this sample to have received formal training in ECD.

In addition, the research findings showed the importance of regular in-service support and mentoring visits.

## **1.5 THE SCOPE OF THE RESEARCH**

The scope of this research study was originally limited to the research problem, namely to identify some of the root causes of the low numeracy levels of Grade 3 learners and to assess whether an appropriate foundation in numeracy is laid in Grade R. The research problem was subsequently phrased into a research question: What are the experiences of selected teachers of teaching numeracy in Grade R?

A further two sub-questions were asked in order to clarify the research problem:

- What are the challenges that face Grade R teachers when they implement numeracy? and
- How do teachers' experiences regarding numeracy influence and affect their teaching strategies in numeracy?

However, during the data analysis of this research study, it came to light that the educational background of Grade R teachers, the complex numeracy curriculum development and implementation, as well as the need to understand how young learners learn, should also be investigated and analysed in this study. In order to understand the complexities of ECD in South Africa, a subsidiary aim of this thesis is then developed in order to provide a comprehensive historical analysis of ECD. ECD is not a “new” concept in South Africa: it has a historical and political background that affects how numeracy is being implemented in Grade R classrooms.

Therefore, the scope of this research study was broadened to include the historical and political context of numeracy in ECD, curriculum policy development and implementation

since 1998. The theoretical discussion on learning theories thus needs to be seen against this context.

## **1.6 A BRIEF REVIEW OF THE SCHEME OF THE DISSERTATION**

Chapters 1, 2, 3 and 4 comprise the Literature Review. (Because of the diversity of the literature, I deemed it necessary to divide the Review into four chapters.)

Chapter 2 focuses on the historical and political context of implementing numeracy in ECD sites, as it not only forms part of Grade R teachers' experiences and background, but also has a definite impact on how numeracy is implemented in Grade R.

Chapter 3 gives an in-depth description of the curriculum road that Grade R teachers have had to travel in the past twelve years. It also provides an overview of the new curriculum direction they will have to take until 2014 (when the Curriculum and Assessment Policy Statements will be reviewed). One of the aims of this chapter is to provide the reader with an opportunity to experience the overwhelming curriculum demands which have been made of Grade R teachers and practitioners in the past twelve years. It is hoped that the reader will come to understand the feelings of curriculum overload that Grade R teachers and practitioners *might* have experienced. In this chapter, there is discussion of the background of three curriculum policies, their principles and curriculum design features, as well as a comprehensive look at the numeracy and mathematical knowledge with which learners in the Grades R – 3 ECD Foundation Phase band are expected to be engaged.

Chapter 4 explains how learning by young learners takes place according to four learning theories. The relationships of each learning theory to Curriculum 2005 and

NCS are discussed. Guidelines are provided regarding how a Grade R classroom should function when numeracy is implemented, in relation to each of the four learning theories.

Chapter 5 explains the research processes I used to collect rich and in-depth data reflecting the understanding and experiences of Grade R teachers when they implement numeracy in their classrooms.

Chapter 6 comprises the data analysis.

Chapter 7 makes suggestions on how the findings of the research can be used to ensure that Grade R teachers are knowledgeable and skilled when they implement numeracy in their classrooms, despite varying curriculum prescriptions. The strengths and limitations of the study are also discussed.

## 2.1 INTRODUCTION

Although it was not originally part of the scope of this research study and the research questions, to focus on the historical and political context of numeracy in ECD site, I consider it essential to include it, as the *Report of the Task Team for the Review of the Implementation of the National Curriculum Statement* (South Africa. DoE, 2009) emphasizes that:

Our recent curriculum history has been characterized by radical change within a relative short period. The result has been a high level of confusion amongst teachers around what they are expected to do. These past changes have left tracks in teachers' current understandings and practice, particularly tracks of *Curriculum 2005*. (p. 24)

In the light of above-mentioned quotation, I deemed it necessary to ask:

- what were the said curriculum changes?
- when did these curriculum changes occur?
- what was the impact of the curriculum changes on on numeracy teaching in ECD?

The answers of the first two questions can be found in the historical and political context of numeracy in ECD sites, which I have divided into two periods, pre-1995 and post 1995. Although not planned, the answer regarding the third question, came to light

during the findings of the data analysis (see paragraph 6.4). It is therefore important to look at the history and political context of numeracy in ECD sites, as this forms part of Grade R teachers' experiences of teaching numeracy in Grade R.

The story begins in 1908, when a voluntary welfare organisation, the 'South African National Council for Child and Family Welfare', started to support families and communities; South African government involvement with young children and their families only began in 1940 (Padayachie R., Atmore, E., Biersteker, L., King, R., Matube, J., Muthayan, S., et al., 1994, p. 8). In this chapter I shall discuss the social and educational perspective on young children held by the various ruling political parties. The National Party, with its racialized outlook, had a strong influence on the development and care of young learners pre-1995.

The period post-1995 refers to the political period of post-apartheid government: from 1994 to 1996 the Government of National Unity, and thereafter, the current ruling ANC government. Whilst ECD was the responsibility of fragmented provincial and homeland departments of education pre-1995, a national education department was established in 1995, with nine provincial departments of education which were given the responsibility of implementing ECD in their provinces (South Africa, Department of Education [DoE], 1995). The political and historical context of ECD is summarised in Figure 2.1

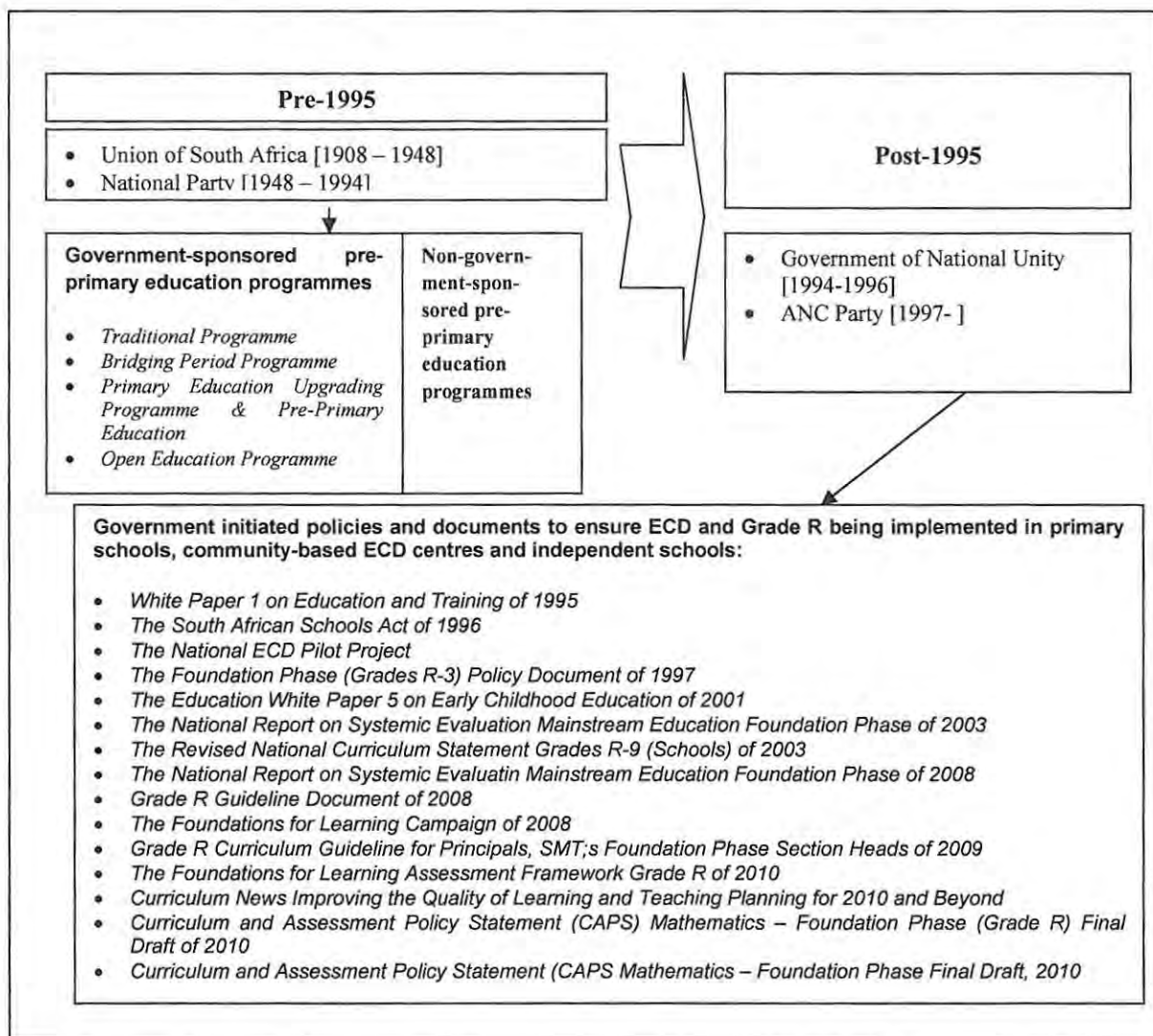


Figure 2.1 The political and historical context of ECD

## 2.2 THE PRE-1995 PERIOD

Although governmental and non-governmental ECD programmes were being conducted in ECD sites prior to 1995, the apartheid government was of the opinion that the supervision and development of young learners were “the responsibility of parents and families and not that of the State” (South Africa, Department of Education [DoE], 1996a, p. 2). Such ECD provisioning by the State as there had been was “characterised

by a long history of discriminatory provision with regard to race, geographic location, gender, special needs and funding” (South Africa, DoE, 1996a, p. 2).

### **2.2.1 Government-sponsored pre-primary education programmes**

Government involvement in the education of young learners can be pin down to 1940, when “the Union Department of Social Welfare provided a per capita subsidy for day care centres and provincial education departments provided subsidies in support of nursery schools” (Padayachie, et al., 1994, p. 8). The standards of these services were not established by the government, but “by the Nursery Association of South Africa, later the South African Association for Early Childhood Education” (Padayachie, et al., 1994, p. 8). From the late 1940s until the 1960s, the government decreased its support for early childhood services, abolishing subsidies for black and brown children, but continuing to provide limited subsidies for white children from poor families. It also closed down or severely curtailed teacher-training opportunities for African and Coloured teachers: “[b]y 1958 the training courses for African teachers were closed. Since then, training for coloured teachers was resumed in 1962 at the Athlone Training Centre, and there was a one-year course for teaching assistants established in Soweto. But little else has been reinstated” (Padayachie, et al., 1994, pp. 8-9).

By the year 1969, “based on the National Education Policy Act of 1967, Provincial Education Departments took over nursery (pre-primary) education and set up training courses. This expanded the provision for White Children in the 1970s” (Padayachie, et al., 1994, p. 9). By 1983, “the government White Paper on the Provision of Education in South Africa (RSA, 1983) accepted the idea of a one to two year bridging programme to facilitate school readiness and stated that, in principle, priority should be given to financing such a programme in the interest of improving efficiency in the system” (Padayachie, et al., 1994, p. 9).

But in 1987, government sponsorship of pre-primary education ended, because the South African National Education Policy (SANEP) did not make “make provision for the financing of pre-primary classes at State schools” (Padayachie, et al., 1994, p. 9).

During 1990, the government launched the Education Renewal Strategy, which acknowledged that “there is no general government policy for pre-primary education, with each education department determining its own approach” (Padayachie, et al., 1994, p. 10).

According to The World Bank Report (Padayachie, et al., 1994) the following government-sponsored pre-primary education programmes were offered:

1. The Department of Education and Training Bridging Period Programme.
2. The House of Delegates: Bridging Module Readiness Classes and the community-run School Readiness Classes.
3. The Cape Education Department Readiness Programme.
4. The Ciskei Education Department’s application of the DET’s Bridging Period Programme.
5. The House of Representatives Pre-School model (p. 18).

Young learners, coming from Venda, Ciskei, Transkei and Bophuthatswana or the so-called Independent States, as well as learners from self-governing states (which included Qua-Qua, Lebowa, Garankula, Kangwane, Kwazulu and Kandebele), were able to attend ECD programmes which were offered by their respective departments of education. Young learners who stayed in the provinces of the Cape, Natal, Orange Free State and Transvaal were also able to attend ECD programmes which were provided by each provincial department of education.

In the following section, I shall discuss four education programmes implemented by these departments of education, focusing on numeracy development. The four education programmes each had their own perspective on how numeracy was to be taught to young learners.

### 2.2.2 Numeracy Content of Government-Sponsored Pre-Primary Education Programmes

The curriculum programmes which will be discussed are:

- *The Traditional Programme;*
- *The Bridging Period Programme;*
- *The Primary Upgrading Programme and Pre-Primary Education;*
- *The Open Education Programme.*

These four pre-primary education programmes were followed in various provincial and homeland pre-primary and primary schools in South Africa until 1996

- *The Traditional Programme*

Bridgemohan (1996) named the education programme which was followed by most governmental pre-primary schools, under the authority of the House of Assembly, in the Cape, Transvaal and Orange Free State, the “traditional programme” (p. 167). According to Bridgemohan (1996), “the term pre-school or pre-primary is used to describe the traditional programme that grew out of the legacy of nursery school. The programme is based on the theories of Piaget, Froebel and Montessori” (p. 166). The purpose of the traditional programme was “to ensure the total development of the child in a non-formal setting. There is emphasis on meeting the needs of individual children” (Bridgemohan, 1996, p. 167).

The traditional programme was arranged in the framework of a daily roster that catered for the following activities:

arrival and departure, free play (indoor and outdoor), routines (lunch, toilet and wash); adult-directed group presentations (music, movement, discussion and story). Free play is time when the child is free to choose the activity he/she desires. (Bridgemohan, 1996, p. 169)

Bridgemohan (1996) points out that, in practice, a

greater emphasis [was] placed on the physical and cognitive (school readiness) aspects of development. Promoting cognitive development to the exclusion of other areas may be attributed to pressure from parents, who insist on their children being taught the 3R's, and teachers in grade one, who expect most of the children to be ready for formal work in the first week of grade one. (p. 168)

In her critique of the traditional programme, Bridgemohan (1996) argues that the traditional programme failed to address the needs and development of young children, as “teachers are not professionally trained and do not have knowledge of learning and child development theories” (p. 173). Teachers did not “receive much guidance from the head of department, principal or superintendents of the respective education department” (ibid.).

This assertion is not actually true for all: it is not true, for instance, that teachers were “not professionally trained” (Bridgemohan, 1996, p. 173). In my own case, I had to obtain a BA degree before I was allowed to enrol for a Higher Education Diploma, specialising in pre-primary education, at UNISA during 1988. Bridgemohan's second point is also contentious, as I was able to obtain for this research study departmental guidelines regarding the implementation and content of daily programmes for pre-primary schools of the Transvaal Education of Department. I got these from a pre-primary school which received the material during 1992.

I agree with Bridgemohan (1996), however, that the traditional programme might have failed to address the needs and development of young children, and especially their numeracy knowledge and skills, as the literature is vague on how much emphasis was to be placed on the development of numeracy concepts prior to 1995.

I will now discuss a particular in-service programme, specifically to gain an understanding of how a young learner's numeracy potential was developed. *Die Kleuterskoolprogram* (Wilkens & Van der Merwe, 1992) was an in-service programme consisting of various lecture handouts that was distributed by the Transvaal Education Department to pre-primary schools under its supervision towards the end of 1992. *Die Kleuterskoolprogram* (Wilkens & Van der Merwe, 1992) made little provision for explicit, focussed and structured learning experiences to promote the development of numeracy concepts and/or content. Most numeracy activities were presented haphazardly and as a means of developing movement, perceptual or art skills (Transvaalse Onderwysdepartement. 1992a, pp. 1-34, 1992b, pp. 1-29; 1992c, pp. 1-21).

In the manual of this in-service program (1992), the only references to mathematical activities were a counting activity involving touching, pointing and looking at when it was time in the daily programme for an eating routine, as well as an activity involving geometrical shapes.

Very few references to numeracy concepts were made during perceptual activities. Wilkens and Van der Merwe (1992b) claim that perceptual activities mostly happen incidentally and should be integrated throughout the daily programme in art activities, block corners, puzzle corners and free-play with educational toys (p. 7). The focus tended to remain on concepts such as balance, posture, laterality, direction, crossing of the midline and rhyme, identifying and sorting geometric shapes, position in space, patterns, analysis and synthesis, perceptual constancy regarding shape, colour, size,

number and texture, and time concept (Transvaalse Onderwysdepartement, 1992b, pp. 14-27, 62-71).

Numeracy concepts were integrated into art activities. And although numeracy concepts such as shape, colour, position in space, patterning and measurement and problem-solving, were spontaneously evident when learners engaged in creative activities, the in-service training manual focussed more on describing the various types of art activities – constructions, woodwork, drawing, painting, cutting and modelling (Transvaalse Onderwysdepartement, 1992c, pp. 3, 8, 11–15). Wilkens and Van der Merwe (1992) make no mention of specific numeracy concepts and skills in attributing the value of art activities to enjoyment, experiencing success, stress release, enhancing of fine motor eye-hand co-ordination as well as technical skills, enhancing perceptual and aesthetic appreciation and social skills, and developing creative thinking (Transvaalse Onderwysdepartement, 1992c, pp.3, 15, 16 ).

Although three-dimensional and two-dimensional materials were used to create art products, these numeracy concepts were not explained and were implicit in the creative activity lesson. According to the notes of lecture 7, the role of the teacher was to give guidance and help only when the learner indicated that he/she needed assistance (Transvaalse Onderwysdepartement, 1992c, p. 16).

Numeracy concepts were more evident in baking activities, which took place at least once a month. These included measuring, counting, number concept related to measuring spoons, sorting, classifying and time concept (Transvaalse Onderwysdepartement, 1992d, p. 7). Wilkens and Van der Merwe (1992) acknowledge in their in-service training manual that baking activities provide rich opportunities for numeracy experiences, including incidental pre-maths, science, perception and language development. It offered opportunities whereby numeracy concepts and scientific changes could be experienced practically and therefore also be discussed (Transvaalse Onderwysdepartement, 1992d, p. 16).

In summary, the danger of having no prescribed numeracy curriculum for young learners can clearly be observed in *Die Kleuterskoolprogram* of Wilkens and Van der Merwe (1992), where the focus is on the development of movement, perceptual and art skills. The only planned activities in which learners were deliberately introduced and exposed to numeracy concepts were those associated with baking (Transvaalse Onderwysdepartement, 1992d, p. 7). This was in stark contrast to the daily programme, in which numeracy concepts were informally, incidentally and haphazardly introduced to learners in structured and unstructured activities.

According to Grobler, Calitz, Van Staden and Orr (1992), the motivation for having no standardized and prescribed curriculum was that a fixed day-to-day learning programme and content would have a negative impact on the spontaneous self-development and self-learning of a young learner (p. 20). Grobler et al. (1992, p.20) caution that the absence of a curriculum based on aims might lead to intuitive and haphazard teaching methods, with only informal guidelines regulating content, which, as we have seen, was the case with the traditional programme. On the other hand, such a curriculum might result in an over-emphasis on results and a focussing on the end product in pre-primary schools. This, as I have subsequently discovered, is the case with schools that followed the Bridging Period Programme of the Department of Education and Training.

- *The Bridging Period Programme of the Department of Education and Training*

Whilst the “traditional programme” was followed by white learners attending pre-primary schools in the Cape Province, Transvaal and Orange Free State, the Department of Education and Training’s responsibility was the provision of education opportunities to black learners in South Africa (Biersteker, 2010, p. 14).

The *Bridging Period Programme* or BPP was developed in the 1980s. In 1981 a “report of the De Lange Commission of Inquiry into Education in the Republic of South Africa (Human Sciences Research Council, 1981) proposed the introduction of a ‘partial institutionalisation of pre-basic education’ in the form of a bridging period to achieve school-readiness for as many children as possible prior to formal education” (Biersteker, 2010, p. 14). According to Biersteker (2010), the De Lange Commission’s recommendations were put into practice when the

1983 White Paper on the Provision of Education in South Africa, took up the recommendation of a bridging period of one to two years aimed at promoting school readiness prior to entry into basic education and also recommended priority be given to financing this in the interests of improving efficiency in the education system. (p. 14)

Subsequently the Department of Education and Training (DET) “developed a *bridging programme* as part of Substandard A” or shortened as SSA (Padayachie, et al., 1994, p. 19). The *Bridging Period Programme (BPP)* was implemented at “primary schools with three or more SSA classes” (Padayachie, et al., 1994, p. 20). This took place within the Grade 1 year, thus requiring no additional subsidisation (Padayachie, et al., 1994, p. 14). The programme was described as “*an appropriate programme of pre-basic education as a form of support and community development, designed to equip as many children as possible for formal education (RSA, DEC 1992:20)*” (Padayachie, et al., 1994, p. 17).

According to a World Bank Report, approximately 31 000 children were attending either state-subsidized or state-initiated pre-primary programmes in six African education departments by 1987 (Padayachie, et al., 1994, p. 20).

The BPP consisted of three phases. In phase 1, all children who were 6 years of age or 5 turning 6 before 20 June enrolled in school, and received a three-week orientation programme at the primary school.

Phase 2 commenced with learners who were found to be school-ready after the orientation programme being moved to the Substandard A class to begin formal education. Learners who were found to be not ready remained in the orientation programme and followed a Bridging Module for 12 weeks.

In Phase 3, these learners were tested after the 12 weeks in order to see which of them were now ready to start with their formal education in Substandard A. Learners who were not ready for formal education remained in the orientation or bridging class and were exposed to an extended programme which focussed on school readiness, for the rest of the year.

During the following year, learners who were placed in the orientation class had to participate in Phases 1 to 3 again. Thus the BPP “effectively provides a year of pre-primary education (two years for some) for those children who require it” (Padayachie, et al., 1994, p. 20). The BPP was discontinued when the ruling government withdrew funding for it in 1990 (Padayachie, et al., 1994, p. 20).

Although the programme was a way to address access to and success in pre-primary classes using limited funding, it was based

on a remedial approach to learning. There is an emphasis on providing young children with skills that will help them survive in the primary school (socialisation to the school culture, the ability to follow directions, listen, repeat, copy, etc.) (Padayachie, et al., 1994, p. 19).

The researchers responsible for the World Bank Report (Padayachie, et al., 1994) criticised the *Bridging Period Programme* of the Department of Education and Training because it did not adhere to the principles of an integrated and holistic child development programme, noting that there was “an emphasis on cognitive development, narrowly defined in terms of school readiness skills, rather than an orientation to developmentally based life-long learning” (p. 19). The World Bank Report concluded that this programme, administered as it was in primary schools, focussed almost exclusively on making the child ready for school (ibid.).

When I studied the guidelines regarding structured creative activities (South Africa. Department of Education and Training [DoE&T], n.d.) in order to obtain an understanding of how numeracy was implemented in DET schools, I observed a step-by-step approach to presenting different creative activities whilst making use of various worksheets (pp. 1-15). The aims of these structured creative activities and exercises were “programmed to achieve progression in conceptual development step by step: to practise, fix and test the concepts being learnt and to promote logical thought and creative activity” (South Africa. DoE&T, n.d., p. 1). Numeracy concepts such as circles, squares, triangles, rectangles, ovals and diamonds and known as geometric shapes, together with the concepts of laterality, direction and spatial orientation were addressed in an instructional manner by the teacher, and the learners had to complete worksheets on each concept.

In contrast with the so-called traditional programme, then, the Department of Education and Training prescribed a numeracy curriculum which ran the risk of impacting “negatively on the spontaneous self-development and self-learning of a young learner” by focussing on an end product (Grobler et al., 1992, p. 20). I was therefore curious to find out whether the next educational programme, namely the *Bophuthatswana Primary Education Upgrading Programme (PEUP) and Pre-Primary Education* (Padayachie, et al., 1994) would perhaps turn out to include a numeracy programme in which learners mastered numeracy concepts through self-development and self-learning as well as through focussed numeracy interventions (p. 21).

- *The Primary Education Upgrading Programme (PEUP) and Pre-Primary Education*

The *Primary Education Upgrading Programme (PEUP) and Pre-Primary Education* (Padayachie, et al., 1994, p. 21) of the independent state of Bophuthatswana differed from the traditional and bridging period programmes as its focus was “to tackle the problem of repetition and drop-out, not by adding a bridging year but by experimenting with upgrading the primary school and by developing a pre-primary programme for children 3-6 years of age” (Padayachie, et al., 1994, p. 18).

The development of the *Bophuthatswana Primary Education Upgrading Programme* was rooted in research studies conducted by the HSRC “to examine the ‘disadvantages’ of the African child’s home environment”. Thus “children were observed and tested before entrance into school and after a few years in school” (Padayachie, et al., 1994, p. 21). These studies concluded that school failure needed to be looked at not only from the perspective of the learner’s home life experiences, but also from the perspective of “the actual school experience itself” (Padayachie, et al., 1994, p. 21).

The *Bophuthatswana Primary Education Upgrading Programme* was introduced in 1979, and by 1988, “all 840 primary schools in Bophuthatswana were included” (Padayachie, et al., 1994, p. 21). By 1994, 32 000 young learners from predominantly rural areas in Bophuthatswana were attending 532 preschool classes (Padayachie, et al., 1994, p. 22).

According to the World Bank Report (Padayachie, et al., 1994), the Bophuthatswana pre-primary programme differed from other bridging and pre-primary programmes in that it did not focus on “school readiness as its major aim”, but rather on the holistic development of young children in terms of social, emotional, spiritual, physical and mental aspects (p. 22). Although a daily programme with structured and unstructured

activities was followed, there was no formal teaching of numeracy and/or mathematical knowledge. Numeracy concepts such as number, size, shape, comparisons, matching and counting objects to six, occurred incidentally, when the young learner was involved with block play, box construction, sand and water play, as well as playing with educational toys.

- ***The Open-Education Programme***

Although the House of Assembly promoted the traditional programme in three provinces for white learners, it followed a different curriculum programme, namely the open education programme, in pre-school classes in the former Natal Province.

Open education refers to a system in which the learning areas or spaces are not limited to a specific classroom but allow “children to move freely between interest areas, and because the content is ‘open’, derived from the children’s interests rather than prescribed curriculum” (Bridgehoman, 1996, p. 174). The children “move from one classroom to another at different times in the day” (Bridgehoman, 1996, p. 176).

The content in the open education programme focussed on a “reading corner, math centre, art centre, creative arts, building area, and areas for block, fantasy, sand and water play” (Bridgehoman, 1996, p. 176).

The open education programme, which was supported by the *Learning Through Activity: The School Readiness Programme* guidelines (De Waal, Behm, Daniel, Morris, Scholtz, & Thompson, 1993), focussed on school readiness as the ultimate goal:

Learning experiences are consolidated in this year and skills, concepts and attitudes needed for formal learning are consciously pursued. The

LTA Programme takes cognisance of the demands of formal education and can be seen as the beginning of the Formative Phase. (De Waal, et al., 1993, p.12)

According to Bridgehoman (1996) the teacher organised and directed learning activities which focused on “achieving pre-literacy, pre-writing, and pre-maths skills” (pp. 175-176), while for De Waal, et al. (1993) a young learner in an open education classroom developed his/her mathematical awareness incidentally “through play, exploration and social interaction” (p. 25). This incidental awareness was enhanced by “the provision of planned learning experiences, and through one-to-one interaction” between the teacher and the learner (De Waal, et al., 1993, p. 25). The purpose of the one-to-one interaction between the teacher and the learner was to develop the young learner’s thinking, logical and reasoning skills (De Waal, et al., 1993, p. 25).

According to De Waal, et al. (1993), the following mathematical concepts were covered in the open education classroom:

- Relationships [covering size, length, height, mass, volume, capacity];
- Spatial Relationships [focussing on laterality and midline, the learner’s body in space, directionality and spatial viewpoints];
- Shapes and Mathematical concepts regarding Number [including the language of mathematics, the concept of relationship, classification, counting and tallying, one-to-one correspondence, number value and ordering, sequencing and seriation] (pp. 35–36)

The *Learning Through Activity* guidelines (De Waal, et al., 1993) advocate the learning of mathematical knowledge and skills by specifying objectives and evaluation criteria for the content of learning experiences that the child was to undergo through play, creative activities, structured baking or science rings, or a formal activity such as tracing around shapes. The guidelines also suggest resources to be used (pp. 53-138), and topics to be explored in a term-by-term progression (pp. 37-38).

In summary, the extent and nature of Government involvement in ECD programmes varied from 1940 until 1994. The involvement varied from financial subsidies, to day care and pre-primary schools, to training opportunities for teachers. The involvement of Government in ECD programmes gained momentum during the 1970s when traditional programmes were being followed by governmental pre-primary schools of the House of Assembly, in the provinces of the Cape, Transvaal and Orange Free State. This involvement was extended to include the Department of Education and Training's Bridging Period Programme (BPP), the Bophuthatswana Primary Education Upgrading Programme (PEUP) and Pre-Primary Education, and the Open Education Programme in Natal.

A turn-around for government involvement in early childhood development occurred during 1992, when the National Education Policy Investigation made "clear recommendations on how early childhood provision might be structured, with attendant roles and responsibilities in relation to those recommendations" (Padayachie, et al., 1994, p. 10). Accordingly to The World Bank Report, early childhood development was not only placed on the education and political agenda but the early childhood community was also now ready to take up its role as a major player and stakeholder in the "reconstruction and development of South Africa" (ibid.).

### **2.2.3 Some non-government-sponsored pre-primary education programmes**

As mentioned above, non-governmental involvement in young learners can be dated back to 1908, when a voluntary welfare organisation, the "South African National Council for Child and Family Welfare", not only investigated "infant mortality and morbidity rates which plagued the country", but also supported families and communities (Padayachie, et al., 1994, p. 8). By 1930, there were numbers of nursery schools in South Africa (Padayachie, et al., 1994, p. 8).

The World Bank Report (Padayachie, et al., 1994) stated that more than a half million young learners were exposed to early learning experiences, as a result of community development organisations such as the South African Council of Churches, SA National Council for Child and Family Welfare, Kindernothilfe which focussed on rural pre-schoolers, World Vision South Africa, SACSELE (South African Christian Society for Early Learning Educare) and Ithemba Labantwana, with their focus on women who provided early childhood development services from their homes (p. 18, pp. 46-47).

Despite these initiatives to expose young learners to early learning programmes, access to early childhood development was a privilege as only “between 9 and 11% of all South African children from birth to six years have had access to public or private ECD facilities” (South Africa. DoE, 1996, p. 2). This meant that “one in three White infants and children receive ECD services, compared with about one in eight Indian and Coloured children and one in sixteen African children” (South Africa. DoE, 1996, p. 2). The *Interim Policy* (South Africa. DoE, 1996a) acknowledged the vital role non-governmental organisations played in early childhood development during the 20<sup>th</sup> century: “In the absence of effective State intervention the major lifeline for the provision of ECD services to communities has been non-governmental agencies and the efforts of parents and community-based organisations” (p. 4).

Some non-governmental organisations were also involved in informal training for early childhood development assistants and practitioners. For example, the Athlone Early Learning Centre, an experimental pre-primary project for disadvantaged children, was opened in 1971. Subsequently, ELRU or the Early Learning Resource Unit was established in 1978, also in Cape Town. ELRU focussed on fostering learning opportunities for young learners by developing skills and resources, as well as providing training for teachers, including the training of personnel of other non-governmental organisations involved with early childhood development (Calitz, Swanepoel, Van Heerden, Penning, & Excell, 1993, p. 106).

Grassroots, another Western Cape non-governmental organisation, was established in 1972 to provide services for black pre-primary children. The Grassroots Educare Trust Centre's Educare Training made provision for the training of "Educare" teachers and "Home Educare Visitors" in centres and homes affiliated to Grassroots (Calitz et al., p. 107).

Other non-governmental organisations which also played an important role in providing early childhood development services and training included Training and Resources in Early Education (TREE) in KwaZulu-Natal, Ntataise Farm Preschool Project in the Orange Free State and the Border Early Learning Centre in the Eastern Cape (Calitz et al., 1993, pp. 108-109).

Padayachie, et al. (1994) and Biersteker (2010) emphasize the significant role that non-governmental organisations played in ensuring that young children's rights and needs became part of the political agenda of the new government in 1994:

During the apartheid era, as a response to the denial of children's most basic rights and increasing state violence against children on account of their political activism, a strong child rights movement developed in South Africa. This led to the formation of the National Committee on the Rights of the Child in 1990, following a conference in Botswana. This committee, with support from UNICEF, undertook the first situation analysis on the condition of women and children in South Africa. Services for young children were an aspect of the agenda of the child rights movement and were included in this first situation analysis. ECD later became a priority area for the 1996 National Programme of Action for Children. (Biersteker, 2010, p. 7)

Padayachie, et al., (1994) record that during 1990, a "National Interim Working Committee (NIWC) on ECD, with the mandate to build grassroots support and help

formulate the vision” was convened, in order to ensure that early childhood development would have a high profile on the political agenda (p. 11). In 1994, a national ECD organisation namely, the South African Congress on Early Childhood Development was formed to represent the ECD sector as a whole (Padayachie, et al., 1994, p. 12).

## 2.3 THE POST-1995 PERIOD

The period following 1995 was an active and focussed period for the new national and provincial departments of education, as they sought to make early childhood development, especially the Reception Year, part of the formal education of a five-year-old learner. The following documents, policies, projects and programmes will be analysed with regard to Grade R and ECD provisioning in South Africa:

- 2.3.1 *The White Paper 1 on Education and Training of 1995;*
- 2.3.2 *The South African Schools Act of 1996;*
- 2.3.3 *The National ECD Pilot Project;*
- 2.3.4 *The Foundation Phase (Grades R to 3) Policy Document of 1997;*
- 2.3.5 *The Education White Paper 5 on Early Childhood Education of 2001;*
- 2.3.6 *The National Report on Systemic Evaluation Mainstream Education Foundation Phase of 2003;*
- 2.3.7 *The Revised National Curriculum Statement Grades R-9 (Schools) of 2003;*
- 2.3.8 *The National Report on Systemic Evaluation Mainstream Education Foundation Phase of 2008;*
- 2.3.9 *The Grade R Guideline Document of 2008;*
- 2.3.10 *The Foundations for Learning Campaign of 2008;*
- 2.3.11 *The Grade R Curriculum Guideline for Principals, SMTs and Foundation Phase Section Heads of 2009;*
- 2.3.12 *The Foundations for Learning Assessment Framework Grade R of 2010;*

- 2.3.13 *The Curriculum News Improving the Quality of Learning and Teaching Planning for 2010 and Beyond*;
- 2.3.14 *Curriculum and Assessment Policy Statement (CAPS) Mathematics – Foundation Phase (Grade R) Final Draft, 2010*;
- 2.3.15 *Curriculum and Assessment Policy Statement (CAPS) Mathematics – Foundation Phase Final Draft, 2010*.

### **2.3.1 The *White Paper 1 on Education and Training, 1995***

The importance of early childhood development in a democratic South Africa was prioritised in the *White Paper on Education and Training* (South Africa. Department of Education [DoE], 1995):

The care and development of young children must be the foundation of social relations and the starting point of human resource development strategies from community to national levels. (p. 29)

According to Biersteker (2010), the significance of the *White Paper on Education and Training of 1995* lies in the ruling party's obligation "to providing 10 years of free and compulsory schooling per child, starting with a reception year for 5 year olds" (p. 8). The *White Paper* (South Africa. DoE, 1995) describes "Early Childhood Development (ECD)" as "an umbrella term which applies to the processes by which children from birth to nine years grow and thrive, physically, mentally, emotionally, morally and socially" (p. 33).

The first step in realizing early childhood development as part of the official education system of the new government in 1995 was the establishment of an Early Childhood Development Directorate at the National Department of Education (South Africa. DoE,

1995, p. 30). This meant that nineteen departments of education were reorganised and rationalised “into one integrated system consisting of a national Department of Education and 9 provincial departments responsible for the provision of schooling” (South Africa. DoE, 1995, p. 5).

The newly established ECD Directorate of the National Department of Education was established to ensure the “development of national policy frameworks for the education of the young child, including the structure of provision, the determination of financial responsibilities, and the establishment of national norms and standards for ECD curricula and training” (South Africa. DoE, 1995, p. 30).

### **2.3.2 The South African Schools Act 84 of 1996**

According to the *South African Schools Act* (South Africa. Department of Education [DoE], 1996b), a young learner begins his or her formal and compulsory education “from the first school day of the year in which he or she reaches the ages of seven years” (p. 5). During 2001, *Article 4 of the South African Schools Act 84 of 1996* (South Africa. Education Labour Relations Council, 2003) was amended to make provision for learners that are younger than seven years of age also to be admitted to Grade One (p. B-62). Although the “South African Schools Act” (South Africa. DoE, 1996) did not make specifically reference to the Reception Year as being part of the first year of enforced education, subsequent documents, for example, the *Interim Policy for Early Childhood Education* (South Africa. DoE, 1996a), the *Foundation Phase (Grades R to 3) Policy Document* (South Africa. DoE, 1997b) and the *Education White Paper 5* (South Africa. DoE, 2001) stressed that the Reception Year for five-year-old learners would eventually form part of compulsory school attendance. The Reception Year would be the first year of a four-year Foundation Phase.

The admission age of a Grade R learner is clarified in *the Grade R Curriculum Guideline for Principals, SMTs, Foundation Phase Section Heads* (South Africa, Eastern Cape Department of Education [ECDoE], 2009), as follows:

No. 50 of 2002: Education Laws Amendment. Section 5 of the South African Schools Act, 1996 was amended by the substitution for subsection (4) of the following subsection:

- (i) Grade R is age four turning five by 30 June in the year of admission
  - (ii) Grade 1 is age five turning six by 30 June in the year of admission.
- Parents may however choose to send the learner to a Gr R and Gr 1 at a slightly older age namely:

- 5 turning 6 in the year of admission to Grade R
- 6 turning 7 in the year of admission to Grade 1. (p.1)

### **2.3.3 The *Interim Policy for Early Childhood Development, 1996***

The vision for early childhood development held by the new national education department was

that it will serve as the bedrock for child and family life, as well as for future learning. It will be concerned with the holistic development of the young child and ensure an environment characterised by safety, protection, anti-bias and cultural fairness, so that attitudinal and psychological healing, reconciliation and the start of nation building can take place at a young age. (South Africa. DoE, 1996a, p. 8)

The *Education White Paper 1* (South Africa. DoE, 1995) made a strong case for a national early childhood programme, which will make provision for the “development of national policy frameworks for the education of the young child, including the structure of provision, the determination of financial responsibilities, and the establishment of national norms and standards for ECD curricula and training” (p. 34).

In order to adhere to the vision of providing “a national early childhood programme”, the *Interim Policy for Early Childhood Development* (South Africa. DoE, 1995) made provision for a *National ECD Pilot Project* (p. 30). The brief of the *National ECD Pilot Project* was to come up with a low cost model to implement the Reception year, as well as developing a curriculum for this first year of the Foundation Phase:

This pilot project represents the first step towards implementing the compulsory reception year throughout South Africa. Lasting three years, the pilot project will create and test innovations in the field related to developing interim accreditation and standards for practitioners, building provincial government and non-governmental organisation (NGO) capacity, developing interim policy and establishing sustainable subsidies for community-based ECD programmes. (South Africa. DoE, 1996a, Preface, p. 1)

In accordance with the brief to the *National ECD Pilot Project* (South Africa. DoE, 1996a) regarding a curriculum for the Grade Reception year, an interim curriculum framework and ECD Programme were to be followed in the ECD sites and Grade R classes, (Appendix 2, pp. 4-13). The interim curriculum framework, with its emphasis on outcomes-based learning programmes, advised that “a wide range of activities needs to be provided to assist the development of children’s mathematical concepts”. The “understanding and appreciation of relationships and pattern in number, time and space in their everyday lives” should be the evident result of developing numeracy and mathematical concepts among young learners (South Africa. DoE, 1996a, Appendix 2, p. 9). However, the *Interim Policy for Early Childhood Development* (South Africa, DoE, 1996a) gave no guidance regarding mathematical content, contexts and methodologies, for practitioners involved in the *National ECD Pilot Project*.

#### **2.3.4 Foundation Phase (Grades R to 3) Policy Document, 1997**

Because the Grade Reception year (Grade R) is the first year of a four-year Foundation Phase, even before it became compulsory, it had to adhere to the principles and guidelines of the *Foundation Phase (Grades R to 3) Policy Document* (South Africa. Department of Education [DoE], 1997c), or as it was known in everyday parlance, Curriculum 2005. In terms of this *Policy Document*, the Learning Programme Numeracy consisted of the “Learning Area Mathematical Literacy, Mathematics and Mathematical Sciences” (South Africa. DoE, 1997c), as well as integration with another seven Learning Areas, namely:

- Language, Literacy and Communication (LLC)
- Life Orientation (LO)
- Human and Social Sciences (HSS)
- Technology (TECH)
- Natural Sciences (NS)
- Arts and Culture (AC)
- Economics and Management Sciences (EMS) (ibid.).

Although the “Learning Area Mathematical Literacy, Mathematics and Mathematical Sciences” (South Africa. DoE, 1997c), consists of specific outcomes, range statements, and key performance indicators, it adopted a phase approach and not a grade-specific approach, which led to confusion among teachers about what they were meant to be teaching. In paragraph 3.2, Curriculum 2005 will be discussed in depth as part of curriculum policy development and implementation since 2008.

#### **2.3.5 Education White Paper 5 on Early Childhood Education, 2001**

The outcomes, lessons learnt and recommendations of the *National ECD Pilot Project* influenced the policy implications of the *Education White Paper 5 on Early Childhood Education* (South Africa. Department of Education [DoE], 2001). *White Paper 5* (South

Africa. DoE, 2001) proposes a national three-part system “for the provision of Reception Year programmes to children aged five” (p. 41). It was envisaged by *White Paper 5* (2001) that all five-year-old learners would have attended a Grade R class by the year 2010.

In order to cater for learners younger than four years of age, the *White Paper 5* (South Africa. DoE, 2001) recommends an inter-sectorial approach to integrate pre-grade R programmes for special groups of four- to five-year-old learners, coming from “poor, rural, and HIV/AIDS infected and affected families and those with special learning needs” (pp. 61-65). *White Paper 5* (South Africa. DoE, 2001) included funding proposals, “national policy, norms and standards” for the reception year (pp. 66-70).

The importance of *White Paper 5* (South Africa. DoE, 2001) is that through it the government, and especially the National Department of Education, showed that it was not paying lip-service to early childhood education by providing guidelines and a financial framework for the phasing in of Grade Reception classes in the various provincial departments. Its aim was to ensure that all young learners could exercise their right to a basic education, starting at the age of four-and-a-half (p. 66). A major development took place in that *White Paper 5* (South Africa. DoE, 2001) made it clear that Gr R classes needed to implement the national curriculum for the Reception Year (p. 68). For the first time in South African history, a national prescribed curriculum was to be followed in all public Grade R classes.

### ***2.3.6 National Report on Systemic Evaluation Mainstream Education Foundation Phase 2003***

During 2001 a systemic evaluation study was conducted at 5% of Grade 3 classes in South Africa to: “determine the context in which learning and teaching is taking place; obtain information on learner achievement; identify factors that affect learner

achievement; and reach conclusions about appropriate education interventions” (South Africa. DoE, 2003c, p. 5).

The *Systemic Evaluation Foundation Phase Mainstream National Report* (South Africa, DoE, 2003a) emphasised that the National Department of Education’s policy to “make Grade R accessible to all learners is indicative of the Department’s recognition of the value of Grade R in the life of the learner” (p. 25). The report (South Africa, DoE, 2003a, p. 25) stressed the importance of the monitoring role of provincial departments of education regarding Grade R provisioning, as there was a high correlation between learners who had access to early learning stimulation and education at pre-schools and subsequent success in the Foundation Phase. The *Systemic Evaluation Report* (South Africa, DoE, 2003a) maintained that the implementation of a Grade R year would reduce the number of foundation learners having to repeat a year, as well as have an impact on learner enrolment (p. 25).

### **2.3.7 Revised National Curriculum Statement Grades R-9 (Schools), 2003**

After a frustrated outcry from teachers and their unions as well as academics regarding the design of Curriculum 2005 and its implementation, the Minister of Education, Kadar Asmal, established a committee to review, “streamline and strengthen the curriculum, focusing on elements of the design, structure and implementation” (Ishmail, 2004, p. 115). The Curriculum Review Committee’s recommendations resulted in “the production of a simplified National Curriculum statement for Early Childhood Development (ECD)” (Ishmail, 2004, p. 126).

Although the *Revised National Curriculum Statement for Grades R – 9 (RNCS)* (South Africa. DoE, 2002a, 2002b) is discussed in detail in paragraph 3.3 of the next chapter, it is important to take note of this development here. For the first time in the history of early childhood development, a national curriculum statement is being followed by Grade R classes in public schools. The RNCS (South Africa. DoE, 2002a), which became in 2008 the *National Curriculum Statement* or NCS, outlined the learning outcomes and assessment standards that Grade R learners were expected to achieve by

the end of the Grade R year. The *RNCS Overview* (South Africa. Department of Education (DoE], 2002b) allocated 35% of teaching time to the implementation of the Numeracy Learning Programme in the Foundation Phase (p. 17). The Numeracy Learning Programme has, as its core, the Learning Area Mathematics with its five Learning Outcomes and specific Assessment Standards for Grade R.

### ***2.3.8 National Report on Systemic Evaluation Mainstream Education Foundation Phase 2008***

At the government's first Foundation Phase Conference which was held on 30 September 2008 (South Africa. Department of Basic Education [DoBE], 2008b), the minister of Education, Ms Naledi Pandor, informed the audience that a second Systemic Evaluation had been conducted with Grade 3 learners during October 2007. Although the findings of the second evaluation were an improvement on the first baseline systemic evaluation of 2001, the results were still very disappointing: it was found that only 36% of Grade 3 learners were literate whilst only 35% of them were coping with numeracy. Ms Pandor told the audience that

Quality foundation-phase education is critical. It is within the foundation-phase grades, Grades R to 3, that basic literacy, numeracy and life skills are developed and advanced. In the foundation-phase learners must learn how to read, write, count and calculate confidently and with understanding. (South Africa. DoBE, 2008b)

She emphasised that

Universal access to Grade R is a key objective for the Department. Already we have over 600 000 young children attending Grade R classes. We have committed ourselves to the provision of universal Grade R

education by 2011. Our commitment is not only to provide physical access for all learners to Grade R classrooms, but also to ensure that these learners experience quality education in these classrooms. We have implemented a curriculum that is explicit about the skills and competencies that learners must develop at different grade levels. It clearly spells out the knowledge that needs to be acquired. (South Africa. DoBE, 2008b)

### **2.3.9 Grade R Guideline Document 2008**

Although the NCS (South Africa. DoE, 2003b) spelt it out clearly that Grade R is a separate grade within the Foundation Phase band, confusion was experienced at several schools (p. 19). Some School Management Teams felt that the aim of a Grade R class was to make certain that learners would be able to read and write when they attended Grade One the following year. In some schools, such classes became a watered-down Grade One class, where the learners were formally taught to read and write.

In order to ensure that Grade R was being regarded as part of the Foundation Phase but not a mini-Grade One class, the *Grade R Guideline Document* (South Africa. Eastern Cape Department of Education [ECDoE], 2008b) was sent to all schools with Grade R classes in the Eastern Cape. The *Grade R Guideline Document* (South Africa. ECDoE, 2008b) acknowledges that “the National Curriculum Statement starts from **Grade R** and thus Grade R forms an integral part of the Foundation Phase and should not be isolated” (p. 1). The document goes on to clarify what is meant by the term Grade R: “The term Grade R will be used uniformly to mean the year before entering Grade 1” (South Africa. ECDoE, 2008b, p. 1).

### 2.3.10 *Foundations for Learning Programme, 2008*

The Minister of Education, Ms Naledi Pandor, made specific reference to Grade R learners “at the launch of the Foundations for Learning Campaign” (South Africa. Department of Basic Education [DoBE), 2008a) in Cape Town on 18 March 2008, when she acknowledged that:

Our commitment is not only to having young learners in class, but our commitment is to ensuring that these youngsters receive quality grade R education in which they develop their sense of self, their self confidence and their understanding of the world around them. (ibid)

The Minister emphasised the important role of the Grade R teacher in teaching young learners “literacy and numeracy skills, so that they know how to engage with books, so to “know that stories come from the books we read and . . . understand the concept of number in the world around them” (South Africa. DoBE, 2008a).

Although the *Foundations for Learning Campaign* (South Africa. DoE, 2008b) is aimed at improving the literacy and numeracy skills of Grade 1 to Grade 3 learners in a four-year period, specific reference is made to Grade R regarding assessment requirements: “Learner progress in Literacy and Numeracy (Languages and Mathematics) will be reflected in the *individual records of each learner from Grade R to 6*” (p. 6).

The *Foundations for Learning Campaign* (South Africa. DoE, 2008b) specifies the expected performance levels of Foundation Phase learners regarding Literacy and

Numeracy. The *Foundations for Learning Campaign* (South Africa. DoE, 2008b) aims to improve learners' performance by 15% - 20% by 2011, when the literacy and numeracy skills of Grade 3 learners will again be assessed (p. 4) (see Chapter 3 for an in-depth discussion of this document).

### ***2.3.11 Grade R Curriculum Guideline for Principals, SMTs, Foundation Phase Section Heads 2009***

Although the *Foundations for Learning Campaign* (South Africa. DoE, 2008b) did not focus directly on Grade R teachers and learners, the importance of this class should not be underestimated. In order further to ensure that the Grade R class would function as a Grade R class and not a substitute Grade One class, schools in the Eastern Cape were provided with a *Grade R Curriculum Guideline for Principals, SMTs and Foundation Phase Section Heads* (South Africa. Eastern Cape Department of Education [ECDoE], 2009). This document gives guidance regarding the organizing and management of the Grade R classroom. It clearly states that Grade R is

the first year in the Foundation Phase and should thus be fully incorporated into Foundation Phase. It forms an integral part of the phase. Grade R Practitioners should be part of the Foundation Phase team and should be monitored and supported by the HOD or Phase Head on a regular basis even if the site is not on the school premises. (South Africa, ECDoE, 2009)

This document (South Africa, ECDoE, 2009) stresses that Grade R learners should not form part of a combined class with another grade.

### **2.3.12 Foundations for Learning Assessment Framework Grade R of 2010**

Due to the fact that the *Foundations for Learning Campaign* (South Africa. DoE, 2008b) did not make provision for Grade R, a second document, named *Foundations for Learning Assessment Framework Grade R* (South Africa. Department of Basic Education [DoBE], 2010c) was developed to address this oversight. In a letter, the Minister of Basic Education explained to Grade R teachers that the aim of the *Foundations for Learning Framework* document (South Africa. DoBE, 2010c) was to assist teachers with their planning as it “organises the Assessment Standards contained in the National Curriculum Statement into manageable ‘sections’. This will help you with your planning and will structure your learners’ learning” (p. 1). Secondly, the *Foundations for Learning Framework* (South Africa. DoBE, 2010c) indicates milestones which young learners need to achieve in each term of the year (pp. 12-14).

### **2.3.13 Curriculum News of 2010**

During 2009, the Minister of Basic Education, Mrs Angie Motshekga, requested an investigation into the execution of the current curriculum (the National Curriculum Statement) (see paragraph 3.3 for an in-depth discussion of the report of the task team as well as the recommendations to implement Curriculum and Assessment Policy Statements by 2011 in the Foundation Phase).

The Minister realised the importance of informing the education fraternity about the “process of curriculum reform” (South Africa, Department of Basic Education [DoBE], 2010c, p. 2). Subsequently, two editions of Curriculum News were issued to teachers, namely *Curriculum News: Improving the Quality of Learning and Teaching Planning for 2010 and Beyond* (South Africa. Department of Basic Education [DoBE], 2010b) issued during January 2010, and *Curriculum News: Improving the Quality of Learning and Teaching* (South Africa. Department of Basic Education (DoBE), 2010c) issued during May 2010.

In the first *Curriculum News* (South Africa. DoBE, 2010b) teachers were informed that “The Department of Basic Education will also extend the *Foundations for Learning Programme to all primary schools in 2010*” (p. 2). In the latest edition (South Africa. DoBE, 2010c), the commitment to ECD and Grade R was emphasised:

We are also focussing on strengthening teaching and learning in Grade R by distributing learning and teaching support packs for Grade R teachers to all 13 900 schools that offer Grade R. You should use them during your teaching of literacy and numeracy to improve, enrich and build on what you are already doing. (p. 3)

#### ***2.3.14 Curriculum and Assessment Policy Statement (CAPS) Mathematics – Foundation Phase Grade R Final Draft of 2010***

In accordance with the Minister of Basic Education’s call for the Curriculum and Assessment Policy Statement to be implemented by all Foundation Phase teachers in 2011, a draft *Curriculum and Assessment Policy Statement (CAPS) Mathematics – Foundation Phase (Grade R)* document was made available to the teaching fraternity for recommendations and critique (South Africa. DoBE, 2010e). See paragraph 3.4.3 for a detailed discussion of this draft document.

#### ***2.3.15 Curriculum and Assessment Policy Statement (CAPS) Mathematics – Foundation Phase Final Draft of 2010***

The *Curriculum and Assessment Policy Statement (CAPS) Mathematics – Foundation Phase Final Draft* (South Africa. DoBE, 2010f) followed the same route as the above-mentioned draft policy document for Grade R. The only difference between the two documents is that the *Foundation Phase Final Draft* (South Africa DoBE, 2010f) includes the *Grade R Final Draft* (South Africa. DoBE, 2010e). It is not clear why these documents were issued for discussion and recommendations separately. It may

have been to make doubly sure that Grade R is not “a ‘watered down’ Grade 1” and that the correct group of teachers, namely Grade R teachers, critiqued it (South Africa. DoBE, 2010e, p. 6) (see paragraph 3.4.2 for an in-depth discussion of this draft document).

## 2.4 CONCLUSION

With the introduction of *White Paper 5 on Early Childhood Development* (South Africa, DoE, 2001), as well as the *Revised National Curriculum Statement Grades R-9* (South Africa. DoE, 2002b), early childhood development in South Africa has achieved full recognition. For the first time in history, a clear vision, implementation framework and curriculum have been compiled and are currently being implemented in public schools and government-subsidized Grade R classes. Grade R teachers underwent orientation training during 2003 and 2004 in the implementation of the Learning Programme Numeracy in Grade R classes.

When the statistics of the Development Bank of Southern Africa (2009) are compared with the statistics of the *Interim Policy* (South Africa. DoE, 1996a), it is clear that the political and educational initiatives since 1995 have had a major impact on the provisioning of ECD opportunities to a large number of young children in South Africa. According to the *Interim Policy* (South Africa, DoE, 1996a) only “between 9 and 11% of all South African children from birth to six years have had access to public or private ECD facilities” by 1996 (p. 2). The statistics of the Development Bank of Southern Africa (2009) indicate that:

The target set out in Education White Paper is to reach full coverage of Grade R ... by 2010, with 85% of provision located in public primary schools and 15% through community sites. The coverage is currently 70%. (p. 4)

However, it is important to consider that implementation of the numerous curriculum policies, documents and guidelines might have had draining effect on the Grade R teacher and her classroom practice. In the paragraphs above, I have discussed thirteen such documents that have been developed and distributed to education stakeholders and role-players since 1995. In the next chapter, I shall provide an in-depth discussion on curriculum policy development and implementation since 1998.

### 3.1 INTRODUCTION

As with the previous chapter which deals with the historical and political context of numeracy in ECD, I originally did not plan to include a chapter focussing on curriculum policy development and implementation since 1998 in this research study. Therefore, when I articulated the research problem and the subsequent research questions, I did not take into account any reference to curriculum policy development. However, during the data analysis of the semi-structured individual interviews it came to the fore that all the individual interviewees experienced frustration regarding planning and interpreting the numeracy curriculum(See paragraph 6.3.2). I therefore found it important to include a discussion on curriculum policy development.

With the publishing of the *Report of the Task Team for the Review of the Implementation of the National Curriculum Statement* (South Africa. DoE, 2009) and its disclosure that teachers are confused due to curriculum changes over the past twelve years , I deemed it necessary to include this focus on curriculum development.

Our recent curriculum history has been characterized by radical change outside a relative short period. The result has been a high level of confusion amongst teachers around what they are expected to do. These past changes have left tracks in teachers' current understandings and practice, particularly tracks of *Curriculum 2005*. (South Africa. DoE, 2009, p. 24)

Valuable lessons were learnt from the experiences of teachers, especially when they voiced their frustration regarding planning, which cannot be ignored. (See paragraph 7.2).

The recent change in curriculum started when Mrs Angie Motshekga, the Minister of Basic Education, announced on Tuesday 6 July 2010, that the Department of Education “will start phasing in the *Curriculum and Assessment Policy Statements* (CAPS) in the Foundation Phase in 2011. We will phase in other grades in 2012” (South Africa. DoBE, 2010d, unpaginated). Mrs Motshekga stated that the “new Curriculum and Assessment Policy Statements will repackage the existing curriculum into the general aims of the South African curriculum, the specific aims of each subject, clearly delineated topics to be covered per term and the required number and type of assessments, also per term” (South Africa. DoBE, 2010d, unpaginated).

Taking into account the above-mentioned CAPS will mean that by the year 2014, Grade R teachers would have been exposed to the training and subsequent implementation of **three** curriculum policies since 1998. In 1998 Grade R teachers had to implement the *Statement of the National Curriculum for Grades R-9* (Curriculum 2005). Four years later, the *National Curriculum Statement* came into existence, and by 2011 the *Curriculum and Assessment Policy Statements* will be followed in all Foundation Phase classes. Prior to 1998, Grade R teachers implemented pre-primary education programmes as prescribed by the different provincial and homeland departments of Education (see paragraph 2.2.1 in the previous chapter).

In order to understand the Grade R curriculum road that Grade R teachers have had to travel over the past twelve years, as well as to obtain an overview of the new curriculum road that they will have to follow until 2014 (when the CAPS will be reviewed), I deemed it important to seek an understanding of the curriculum’s origin, its principles and the numeracy implications for Grade R teachers and learners. This

chapter therefore explores the background of the three curriculum policies, their principles and curriculum design features, and then takes a comprehensive look at the numeracy and mathematical knowledge learners in the Grades R – 3 ECD Foundation Phase band are expected to acquire. In order to place the experiences that Grade R teachers have of teaching numeracy in a broader perspective, it is important that the reader appreciates the historical development of ECD (as discussed in the previous chapter) and the three major recent curriculum changes. Figure 3.1 summarises the curriculum structure of each curriculum policy.

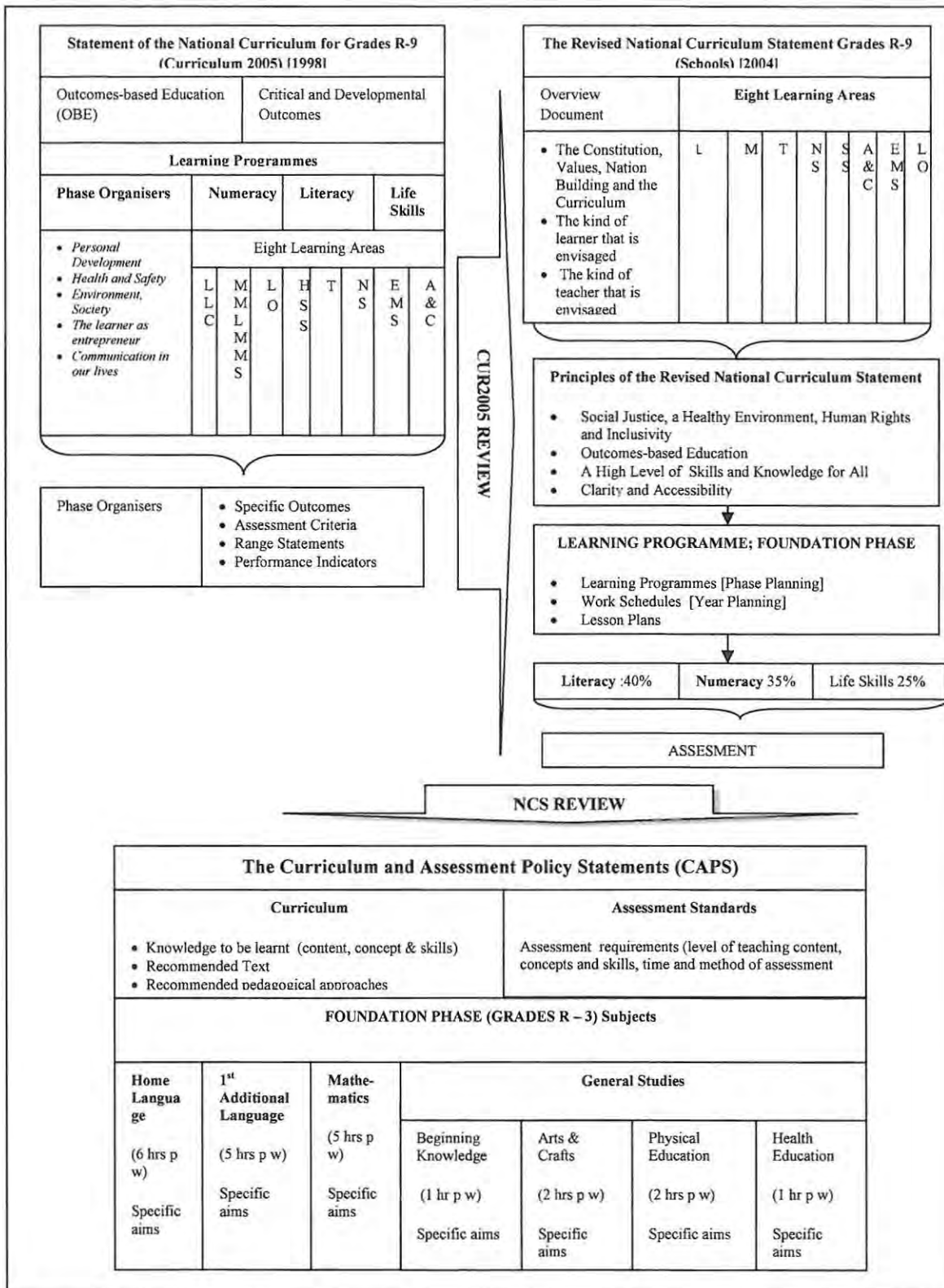


Figure 3.1 Overview of the development and curriculum structures of C2005, NCS and CAPS in the Foundation Phase (Grades R-3)

### **3.2 STATEMENT OF THE NATIONAL CURRICULUM FOR GRADES R-9 (CURRICULUM 2005)**

The “*Statement of the National Curriculum for Grades R-9* was published in terms of Government Notice 1445” in October 1997 (South Africa. DoE, 2002b, p. 5). This curriculum, which became known in everyday use as Curriculum 2005, was the product envisaged by the “*White Paper on Education and Training* (1995), the South African Qualifications Act (No 58 of 1995) and the National Education Policy Act (No 27 of 1996)”. It was aimed at normalising and transforming teaching and learning in a democratic South Africa by introducing a transformational outcomes-based approach (South Africa. DoE, 2002b, p. 4): “[e]mphasis is placed on the necessity for a shift from the traditional aims-and-objectives approach to outcomes-based education” (South Africa. Department of Education (DoE), 1997b, p. 1). According to the “Report of the Task Team for the Review of the Implementation of the *National Curriculum Statement*” (South Africa. DoE, 2009), Curriculum 2005 focussed on “rights-based education and the notion of learner-centredness” and represented a decisive move away from “Christian National Education and its attendant philosophy of Fundamental Pedagogics” (South Africa. DoE, 2009, p. 12).

#### **3.2.1 Outcomes-based Education (OBE)**

The *Foundation Phase (Grades R to 3) Learning Programme Document* (South Africa. Department of Education [DoE], 1997d) emphasised that outcomes-based education or OBE, as it became known, is based “*on the philosophy that all learners can learn*” and “*should be driven by the outcome displayed by the learner at the end of the educational experience (process)*” (p. 18). According to Curriculum 2005 (South Africa. Department of Education [DoE], 1997a), the outcomes-based philosophy requires learning and teaching to focus on skills, knowledge, values and attitudes (p. 32).

The holistic development of a learner and learner-centredness are typical characteristics of an outcomes-based approach. It is flexible because it takes various learning styles and teaching strategies into consideration. Learners are actively engaged in planned learning activities that will lead to the mastering of pre-determined outcomes at the end of the phase. It needs to be anti-biased and makes provision for the inclusion of learners with disabilities and special needs. Because OBE is learner-paced, enough time should be given for learners to master the necessary knowledge, skills, values and attitudes. It should be relevant, accountable and transparent, as well as serving to enhance critical and creative thinking.

Due to the fact that “[w]ithin an Outcomes Based Approach there are no promotion requirements in the General Education and Training (GET) Band until the Grade 9 year, which represents the exit year for the GET Band and the first level of the National Qualifications Framework (NQF)”, it is important that continuous assessment takes place whereby a learner can “progress from one grade to another by reference to chronological age” (South Africa. DoE, 1997d, pp. 18-19, 27, 30).

### **3.2.2 Critical and Developmental Outcomes**

The pre-determined outcomes of Curriculum 2005 were derived from critical cross-field outcomes that underpinned the Constitution and were “first formulated in the South African Qualifications Authority Act of 1995” (South Africa. DoE, 2002b, p. 4). The critical cross-field outcomes became known as Seven Critical Outcomes and Five Developmental Outcomes: see Figure 3.2, below.

| Statement of the National Curriculum for Grades R-9 |   |   |
|---|---|---|
| Critical and Developmental Outcomes                 |   |   |
|   | Critical Outcomes   | Developmental Outcomes  |
| <b>OBE</b>  | <ol style="list-style-type: none"> <li>1. "Identify and solve problems and make decisions using critical and creative thinking</li> <li>2. Work effectively with others as members of a team, group, organisation and community</li> <li>3. Organise and manage themselves and their activities responsibly and effectively</li> <li>4. Collect, analyse organise and critically evaluate information</li> <li>5. Communicate effectively using visual, symbolic, and/or language skills in various modes towards the environment and the health of others</li> <li>6. Demonstrate an under-standing of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation.</li> <li>7. Demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation."</li> </ol> | <ol style="list-style-type: none"> <li>1. "Reflecting on and exploring a variety of strategies to learn more effectively</li> <li>2. Participating as responsible citizens in the life of local, national and global communities</li> <li>3. Being culturally and aesthetically sensitive across a range of social contexts</li> <li>4. Exploring education and career opportunities, and</li> <li>5. Developing entrepreneurial opportunities".</li> </ol> |

**Figure 3.2 Statement of the National Curriculum for Grades R-9 (Curriculum 2005) (South Africa. DoE, 2002b, p. 4).**

### 3.2.3 Learning Programmes (Numeracy, Literacy and Life Skills)

In order for a learner to attain the above-mentioned critical and developmental outcomes at the end of his or her school career, the Grade R teacher needed to plan, facilitate, organise and assess learning activities by making use of three learning programmes namely Numeracy, Literacy and Life Skills (South Africa. Department of Education. [DoE], 1997c, 1997e, 1997f). These included phase organisers (“Personal Development, Health and Safety, Environment, Society, the Learner as Entrepreneur and Communication in Our Lives”); eight learning areas (“Language, Literacy and Communication, Mathematical Literacy, Mathematics and Mathematical Sciences, Life Orientation, Human and Social Sciences, Technology, Natural Sciences, Arts and Culture, Economics and Management Sciences”); specific outcomes and assessment criteria for each of the above-mentioned learning areas; range statements and performance indicators, as well as specifying the notional time to be used during formal schooling hours (South Africa. DoE, 1997d, pp. 14-20). Transformational outcomes-based education was apparent in the integration of all eight learning areas in

the various learning activities of the three learning programmes (South Africa. DoE, 1997d, p. 29). See Figure 3.3.

|                         |  |                                      |  |                  |                            |             |                   |                    |
|-------------------------|--|--------------------------------------|--|------------------|----------------------------|-------------|-------------------|--------------------|
| <b>O<br/>B<br/>E</b>    | <b>Learning Programmes</b>   |                                      |  |                  |                            |             |                   |                    |
|                         | <b>Phase Organisers</b>  | <b>Numeracy</b>                      |  |                  | <b>Literacy</b>            |             |                   | <b>Life Skills</b> |
|                         | <b>EIGHT LEARNING AREAS</b>  |                                      |  |                  |                            |             |                   |                    |
|                         | <ul style="list-style-type: none"> <li>• <i>Personal Development,</i></li> <li>• <i>Health and safety,</i></li> <li>• <i>Environment, Society,</i></li> <li>• <i>The learner as entrepreneur</i></li> <li>• <i>Communication in our lives</i></li> </ul> | Language, Literacy and Communication | Mathematical Literacy, Mathematics & Mathematical Sciences | Life Orientation | Human and Social Sciences, | Technology, | Natural Sciences, | Arts and Culture   |
| <b>Phase Organisers</b> | <ul style="list-style-type: none"> <li>• Specific Outcomes</li> <li>• Assessment Standards</li> <li>• Range Statements</li> <li>• Performance Indicators</li> </ul>  |                                      |  |                  |                            |             |                   |                    |

Figure 3.3 Curriculum 2005 Learning Programmes (South Africa. DoE, 1997d, p. 29).

### 3.2.4 Learning Area Mathematical Literacy, Mathematics and Mathematical Science

In addition to the specific guidelines for the Learning Programme Numeracy in the Foundation Phase as prescribed by Curriculum 2005, Grades R-3 teachers had to take cognisance of the requirements of the “learning area Mathematical Literacy, Mathematics and Mathematical Sciences” when they planned for numeracy activities (South Africa. DoE, (1997c).

The “learning area Mathematical Literacy, Mathematics and Mathematical Sciences” consisted of 10 specific outcomes, 43 assessment criteria, 106 range statements and 131 performance indicators that had to be attained by a Grade 3 learner (South Africa. DoE, 1997c, pp. MLMMS-5-18). For an example of the requirements regarding one Mathematical Literacy, Mathematics and Mathematical Sciences Specific Outcome, to which Foundation Phase teachers were expected to adhere, see Figure 3.4.

| "Learning Programme Statement: Numeracy in the Foundation Phase"  |  |  |                 |                            |   |  |  |  |  |                          |  |  |                                    |   |  |                                   |                           |   |  |
|---|--|--|-----------------|----------------------------|---|--|--|--|--|--------------------------|--|--|------------------------------------|---|--|-----------------------------------|---------------------------|---|--|
| GUIDELINES  | LEARNING AREA MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCE  |  |                 |                            |   |  |  |  |  |                          |  |  |                                    |   |  |                                   |                           |   |  |
| <ul style="list-style-type: none"> <li>nurtures continued perceptual, sensory and motor development</li> <li>uses the learner's own innate, intuitive and experientially acquired knowledge and ability in number and space as a springboard into continued learning</li> <li>ensures the enjoyment of the experiences provided</li> <li>engenders confidence in the young learner's own mathematical abilities</li> <li>encourages learners to develop their own approaches to working with number</li> <li>consolidates in learners a necessary efficiency and fluency in the basic operations on number</li> <li>enables learners to understand and appreciate relationships, logic and pattern in number and space</li> <li>builds on the learner's experience of space, time and motion in their everyday lives in order to assist in structuring and interpreting it through concrete and diagrammatic representation, estimation and measurement</li> <li>develops the ability to communicate mathematically, works co-operatively towards solving problems and uses correct mathematical terminology and symbols</li> <li>enables the young learner to extend from their everyday usage of money into an understanding of simple economic principles and so engender entrepreneurial skills.</li> </ul> | <p><b>Specific Outcome 1: Demonstrate understanding about ways of working with numbers</b></p> <p>The development of number concept is an integral part of mathematics. All learners have an intuitive understanding of the number concept. This outcome intends to extend that understanding. Its aims is to enable learners to know the history of the development of numbers, number systems and use numbers as part of their tool kits when working with other outcomes. Solving problems, handling information, attitudes and awareness may depend crucially on a confident understanding and use of number".</p>   |  |                 |                            |   |  |  |  |  |                          |  |  |                                    |   |  |                                   |                           |   |  |
|   | <table border="1"> <thead> <tr> <th>ASSESSMENT CRITERIA</th> <th>RANGE STATEMENT</th> <th>KEY PERFORMANCE INDICATORS</th> </tr> </thead> <tbody> <tr> <td>1. Evidence of use of heuristics to understand number concept</td> <td>1.1 Use personal experiences to show the significance of number<br/><br/>1.2 Express numbers in words and symbol</td> <td rowspan="6">           This will be evident when learners:           <ul style="list-style-type: none"> <li>identify situations in their environment where numbers are used</li> <li>count a collection of objects, maintaining order in numbers</li> <li>write number symbols and number names</li> <li>skip-count forwards and backwards from a given number</li> <li>use number knowledge to develop strategies to solve problems involving number</li> <li>represent numbers in different cultures, in different epochs</li> <li>tell stories about the development of counting practices in their own communities</li> <li>recognise, write and read Roman Numerals</li> <li>perform operations where place value is used</li> <li>use body parts to estimate and measure length and height</li> <li>estimate length (cm, m, km)<br/>mass (g, kg)<br/>volume (litres, millilitres)<br/>time (minutes, hours, days, weeks, months, seasons, years)</li> <li>choose and use an appropriate measuring instrument and an appropriate measuring unit to check.</li> <li>Solve a variety of computational problems posed in various contexts</li> <li>Use preferred methods</li> <li>Explain preferred methods in a coherent way</li> <li>Use multi-step operations</li> <li>Solve practical problems where real objects are shared equally, leading to fractions</li> <li>Demonstrate that fractional parts can be put together again to form a whole</li> <li>Recognise, read and write the names and notation for common fractions</li> <li>Are unable to do simple addition and subtraction using Rands and cents</li> <li>Use available knowledge of numbers and their environment to solve word problems from familiar contexts"/</li> </ul> </td> </tr> <tr> <td>2. 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| ASSESSMENT CRITERIA   | RANGE STATEMENT  | KEY PERFORMANCE INDICATORS   |                 |                            |   |  |  |  |  |                          |  |  |                                    |   |  |                                   |                           |   |  |
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| 3. Estimation as a skill  | 2.3 Understand the importance of place value   |  |                 |                            |   |  |  |  |  |                          |  |  |                                    |   |  |                                   |                           |   |  |
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| 4. Performance of basic operations  | 4.1 Add and subtract positive whole numbers  |  |                 |                            |   |  |  |  |  |                          |  |  |                                    |   |  |                                   |                           |   |  |
|   | 4.2 Multiply and divide positive whole numbers   |  |                 |                            |   |  |  |  |  |                          |  |  |                                    |   |  |                                   |                           |   |  |
|   | 4.3 Do simple mental calculations  |  |                 |                            |   |  |  |  |  |                          |  |  |                                    |   |  |                                   |                           |   |  |
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| 6. Solving of real life and simulated problems  | 6.1 Solve real life or simulated problems  |  |                 |                            |   |  |  |  |  |                          |  |  |                                    |   |  |                                   |                           |   |  |

Figure 3.4 Learning Programme Statement: Numeracy in the Foundation Phase (South Africa. DoE, 1997c, pp. MLMMS-5-18).

Although the specific outcomes, assessment criteria, range statements and performance indicators aimed to help teachers to “analyse, make and justify critical decisions; and take transformative action” (South Africa. DoE, 1997c), the Grade R teacher found it very confusing, as there was no clear demarcation of which of these Mathematical Assessment Criteria should be taught in the Grade R year, or how they should be taught (p. MLMMS-2). The “Learning Area Mathematical Literacy, Mathematics and Mathematical Sciences” (South Africa. DoE, 1997c) only gave guidance on the specific outcomes to be mastered by the learners at the end of the Foundation Phase, the Grade 3 year.

### **3.2.5 Reports of the Ministerial Review and Project Committees**

Because of objections and complaints from various education role-players, such as teacher unions, higher education institutions, non-governmental organisations and teachers themselves, the Department of Education was under pressure to review the *National Curriculum Statement for Grades R-9* (South Africa. DoE, 1997d). Concerns were raised regarding young learners’ reading, writing and mathematics abilities. There was also confusion amongst teachers regarding the teaching content and methodologies which included “facilitation and group work” (South Africa. DoE, 2009, p. 10).

Subsequently, “At its meeting in June 2000, the Council of Education Ministers agreed that the *Statement of the National Curriculum for Grades R-9* should be revised, in accordance with the recommendations of the *Report of the Review Committee* (31 May 2000) to streamline and strengthen the Curriculum 2005” (South Africa. DoE, 2002b, p. 2). Professor Linda Chrisholm lead the “Review Committee” which had the clear instruction to review “the structure and design of the curriculum, teacher orientation, training and development, learning support materials, provincial support to teachers in school and implementation time-frames” (South Africa. DoE, 2002b, p. 5). In their report, the “Review Committee recommended that strengthening the curriculum required streamlining its design features and simplifying its language through the

production of an amended National Curriculum Statement” (South Africa. DoE, 2002b, p. 5).

The Review Committee recommended that the new revised curriculum should still be based on the twelve critical and developmental outcomes, but there should be a shift from the sixty-six specific outcomes in the foundation phase as per Curriculum 2005 to thirty-four learning outcomes, with grade-specific assessment standards. Curriculum 2005 design tools such as phase organisers, programme organisers, specific outcomes, assessment criteria, performance indicators, range statements and notional time and flexi-time were done away with.

The Review Committee recommended provincial support for teacher orientation and training in order for teachers to be knowledgeable and skilled in implementing the revised curriculum. Learning support materials were to be made available to teachers. “It also recommended the relaxation of time-frames for implementation” (South Africa. DoE, 2002b, p. 5).

The decision of the Council of Education Ministers to accept the Review Committee’s curriculum recommendations were followed by the Cabinet’s decision in July 2000 that:

The development of a National Curriculum Statement, which must deal in clear and simple language with what the curriculum requirements are at various levels and phases, must begin immediately. Such a Statement must also address the concerns around curriculum overload and must give a clear description of the kind of learner in terms of knowledge, skills, values and attitudes – that is expected at the end of the General Education and Training band. (South Africa. DoE, 2002b, p. 6)

The Ministerial Project Committee that was responsible for streamlining and strengthening Curriculum 2005 consisted of approximately one hundred and fifty Curriculum developers. This committee began to carry out its brief of revising Curriculum 2005, according to the recommendations of the Review Committee, during January 2001. After six months, the “*Draft Revised National Curriculum Statement for Grades R-9 (Schools)*” was released for public comment for a period of three months”, which was followed by a process of public hearings during November 2001 (South Africa. DoE, 2002b, p. 2). During December 2001 the Ministerial Project Committee met again to work through, analyse and incorporate contributions received from the education public, thus producing the *Revised National Curriculum Statement Grades R-9 (Schools)* (South Africa. DoE, 2002b, p. 6).

During 2003, provincial departments of education, in collaboration with the National Department of Education and teacher unions, embarked on a process of orientating and training Foundation Phase teachers, including Grade R teachers, in order to prepare them for the implementation of the *Revised National Curriculum Statement Grades R-9 (Schools)* in 2004 (South Africa. DoE, 2002b, p. 6).

### **3.3 THE NATIONAL CURRICULUM STATEMENT**

#### **3.3.1 The *Revised National Curriculum Statement Grades R-9 (Schools)***

During January 2004, the new curriculum, namely the *Revised National Curriculum Statement Grades R-9 (Schools)* was implemented in the Foundation Phase (South Africa. DoE, 2002a, 2002b, 2002c, 2002d, 2002e, 2002f, 2002g, 2002h, 2002i). The *National Curriculum Statement Grades R-9 (Schools)* in the GET Phase refers to the curriculum that is currently in place: it describes learning outcomes for a phase, but prescribes assessment standards for each specific grade. The RNCS Overview document (South Africa. DoE, 2002b) makes it clear that the

revised National Curriculum Statement is thus not a new curriculum but a streamlining and strengthening of Curriculum 2005. It keeps intact the principles, purposes and thrust of Curriculum 2005 and affirms the commitment to outcomes-based education. (p. 6)

The *Revised National Curriculum Statement Grades R-9 (Schools)* consists of “An Overview” as well as “Eight Learning Area Statements” (South Africa. DoE, 2002b, unpaginated). See Figure 3.5.

| "The Revised National Curriculum Statement Grades R-9 (Schools)  |   |   |  |  |   |  |  |   |
|--|---|---|--|--|---|--|--|---|
| Overview Document  | Eight Learning Areas  |   |  |  |   |  |  |   |
| <ul style="list-style-type: none"> <li>The Constitution, Values, Nation building and the Curriculum</li> <li>The kind of learner that is envisaged</li> <li>The kind of teacher that is envisaged</li> </ul>   | <b>Languages</b> <ul style="list-style-type: none"> <li>Generic introduction of the NCS &amp; introduction of the specific Learning Area, its goals and unique features.</li> <li>Learning Outcomes and Grade Assessment Standards</li> <li>Assessment</li> </ul> | <b>Mathematics</b> <ul style="list-style-type: none"> <li>Generic introduction of the NCS &amp; introduction of the specific Learning Area, its goals and unique features.</li> <li>Learning Outcomes and Grade Assessment Standards</li> <li>Assessment</li> </ul> | <b>Natural Sciences</b> <ul style="list-style-type: none"> <li>Generic introduction of the NCS &amp; introduction of the specific Learning Area, its goals and unique features.</li> <li>Learning Outcomes and Grade Assessment Standards</li> <li>Assessment</li> </ul> | <b>Technology</b> <ul style="list-style-type: none"> <li>Generic introduction of the NCS &amp; introduction of the specific Learning Area, its goals and unique features.</li> <li>Learning Outcomes and Grade Assessment Standards</li> <li>Assessment</li> </ul> | <b>Social Sciences</b> <ul style="list-style-type: none"> <li>Generic introduction of the NCS &amp; introduction of the specific Learning Area, its goals and unique features.</li> <li>Learning Outcomes and Grade Assessment Standards</li> <li>Assessment</li> </ul> | <b>Arts &amp; Culture</b> <ul style="list-style-type: none"> <li>Generic introduction of the NCS &amp; introduction of the specific Learning Area, its goals and unique features.</li> <li>Learning Outcomes and Grade Assessment Standards</li> <li>Assessment</li> </ul> | <b>Life Orientation</b> <ul style="list-style-type: none"> <li>Generic introduction of the NCS &amp; introduction of the specific Learning Area, its goals and unique features.</li> <li>Learning Outcomes and Grade Assessment Standards</li> <li>Assessment</li> </ul> | <b>Economics &amp; Management Sciences</b> <ul style="list-style-type: none"> <li>Generic introduction of the NCS &amp; introduction of the specific Learning Area, its goals and unique features.</li> <li>Learning Outcomes and Grade Assessment Standards</li> <li>Assessment</li> </ul> |
| <b>Principles of the Revised National Curriculum Statement</b> <ul style="list-style-type: none"> <li>Social Justice, a Healthy Environment, Human Rights and Inclusivity</li> <li>Outcomes-Based Education</li> <li>A High Level of Skills and Knowledge for All</li> <li>Clarity and Accessibility</li> <li>Progression and Integration</li> </ul> |   |   |  |  |   |  |  |   |
| <b>LEARNING PROGRAMME</b> <ul style="list-style-type: none"> <li>Learning Programmes [Phase Planning]</li> <li>Work Schedules [Year Planning]</li> <li>Lesson Plans</li> </ul>   |   |   |  |  |   |  |  |   |
| <b>Literacy</b><br>Formal teaching time: 40%<br>[Gr R – 2 : 1 hour 50 minutes per day; Gr 3: 2 hours per day]  |   |   | <b>Numeracy</b><br>Formal teaching time: 35%<br>[Gr R – 2 : 1 hour 30 minutes per day; Gr 3: 1 hour 45 minutes per day]  |  |   | <b>Life Skills</b><br>Formal teaching time 25%<br>[Gr R – 2 : 1 hour 10 minute per day; Gr 3: 1 hour 15 minutes per day]   |  |   |
| <b>Languages</b><br>Home Language<br>1 <sup>st</sup> Additional Language<br>2 <sup>nd</sup> Additional Language  | Mathematics   | Natural Sciences  | Technology   | Social Sciences  | Arts & Culture  | Life Orientation   | Economic & Management Sciences   | <b>Life Orientation</b><br>Mathematics<br>Languages<br>Natural Sciences<br>Technology<br>Social Sciences<br>Life Orientation<br>Economic & Management Sciences  |
| <b>Assessment</b><br>Continuous; Outcomes-based assessment; Teachers to teach and guide learners in mastering the Phase Learning Outcomes and Grade Specific Assessment Criteria; Learners to know and demonstrate the values, attitudes and skills of each Learning Areas; Assessment Criteria  |   |   |  |  |   |  |  |   |
| <b>GENERAL EDUCATION AND TRAINING CERTIFICATE".</b>  |   |   |  |  |   |  |  |   |

Figure 3.5 The Revised National Curriculum Statement Grades R-9 (Schools) (South Africa. DoE, 2002b).

The RNCS Overview (South Africa. DoE, 2002b) describes the history of the Revised National Curriculum, and explains the relationships among the curriculum, the Constitution, certain values, and nation-building (pp. 4-8). In direct response to the Cabinet's brief, the document provides a portrait of the kind of learner and teacher foreseen in the *Revised National Curriculum Statement* (South Africa. DoE, 2002b, p. 8). It includes sections entitled "Structure of the Revised National Curriculum Grades R-9 (Schools), Principles of the Revised National Curriculum Statement, Structure and Concepts Used in the Learning Area Statements, Learning Programmes, Assessment" and "General Education and Training Certificate: Learning Areas, Definitions and Outcomes" (South Africa. DoE, 2002b, pp. 8-28).

- ***The Constitution, Values, Nation-Building and the Curriculum***

According to the RNCS Overview (South Africa. DoE, 2002b), the "basis for curriculum transformation and development in contemporary South Africa" can be found in the Constitution of the Republic of South Africa, formulated in Act No 108 of 1996 (p. 6).

The preamble to the Constitution states that the aims of the Constitution are to:

- Heal the division of the past and establish a society based on democratic values, social justice and fundamental human rights.
  - Improve the quality of life of all citizens and free the potential of each person.
  - Lay the foundations for a democratic and open society in which Government is based on the will of the people and every citizen is equally protected by law.
  - Build a united and democratic South Africa able to take its rightful place as a sovereign state in the family of nations.
- (South Africa. DoE, 2002b, pp. 6-7)

The ultimate aim of education and therefore of the curriculum is to “develop the full potential of each learner as a citizen of a democratic South Africa” (South Africa. DoE, 2002a, p. 1).

In highlighting the importance of the Constitution for education, the RNCS Overview (South Africa. DoE, 2002b) acknowledges the importance of ten fundamental values which are referred to as the “Manifesto on Values, Education and Democracy”:

- Democracy
- Social Justice and Equity
- Non-Racism and Non-Sexism
- Ubuntu (Human Dignity)
- An Open Society
- Accountability (Responsibility)
- Respect
- The Rule of Law
- Reconciliation. (p. 7)

In order to ensure that South African learners are aware of the values of the Constitution, the Manifesto identified sixteen strategies which form part of the RNCS (South Africa. DoE, 2002b, p. 7). They are as follows:

- Nurturing a culture of communication and participation in school.
- Role-modelling: promoting commitment as well as competence amongst educators.
- Ensuring that every South African is able to read, write, count and think.
- Infusing the classroom with a culture of human rights.
- Making Arts and Culture part of the curriculum.
- Putting history back into the curriculum.

- Learning about the rich diversity of cultures, beliefs and world views within which the unity of South Africa is manifested.
- Making multilingualism happen.
- Using sport to shape social bonds and nurture nation-building at schools.
- Ensuring equal access to education.
- Promoting anti-racism in schools.
- Freeing the potential of girls as well as boys.
- Dealing with HIV/AIDS and nurturing a culture of sexual and social responsibility.
- Making schools safe to learn and teach in and ensuring the rule of law.
- Promoting ethics and the environment.
- Nurturing the new patriotism, or affirming a common citizenship. (South Africa. DoE, 2002b, pp. 7-8)

Based on the fact that the RNCS is grounded in the Constitution, it emphasises the inculcation through the curriculum of principles such as social justice, equality, human rights and dignity, democracy and respect, and the sustainability of a healthy environment (South Africa. DoE, 2002b, pp. 8, 10).

The RNCS Overview (South Africa. DoE, 2002b) emphasises that:

The Constitution expresses the nation's social values and its expectations of the roles, rights and responsibilities of citizens in a democratic South Africa. The Bill of Rights places pre-eminent value on equality, human dignity, life, and freedom and security of persons. These and other rights to freedom of religion and belief, expression and association, exists side-by-side with socio-economic rights. Each person has a right to freedom from poverty, homelessness, poor health and hunger. (p. 8)

- ***The Kind of Learner that is Envisaged***

Extending the values upheld by the Constitution to the expectations of a learner in a democratic South Africa, the RNCS describes how the potential of such a learner needs to be developed. It is envisaged that learners need to be engaged actively with the learning processes, which would focus on literacy, numeracy, independence, the possession of multiple skills, as well as learning processes that would enhance compassion, respect for nature and social skills. The ultimate goal of the RNCS is to produce a holistically educated learner who is a confident, independent, active but also a critical participant in a democratic South Africa. This kind of learner will be encouraged to become a life-long learner (South Africa. DoE, 2002b, p. 8). Ultimately

The kind of learner that is envisaged is one who will be inspired by these values, and who will act in the interests of a society based on respect for democracy, equality, human dignity, life and social justice.  
(South Africa. DoE, 2002b. p. 3)

- ***The Kind of Teacher that is Envisaged***

The Revised National Curriculum Statement acknowledges that teachers in their classes are key contributors and have an important role to play in ensuring the transformation of South African education (South Africa. DoE, 2002b. p. 9). The “Norms and Standards for Educators of 2000” (*Government Gazette* No 20844) (South Africa. DoE, 2002b) indicates that teachers need to be “qualified, competent, dedicated and caring” (p. 9). Teachers are not seen only as educators but also as “mediators of learning, interpreters and designers of Learning Programmes and materials, leaders, administrators and managers, scholars, researchers and lifelong learners, community members, citizens and pastors, assessors and learning area/phase specialists” (South Africa. DoE, 2002b. p. 9).

- ***Structure of the Revised National Curriculum Statement Grades R-9 (Schools) (RNCS)***

The RNCS consists of an “overview” document as well as “eight Learning Area Statements”, namely “Languages, Mathematics, Natural Sciences, Technology, Social Sciences, Arts and Culture, Life Orientation and Economic and Management Sciences” (South Africa. DoE, 2002b, unpaginated). The RNCS Overview (South Africa. DoE, 2002b) defines a Learning Area as “a field of knowledge, skills, and values which has unique features as well as connections with other fields of knowledge and Learning Areas” (p. 9). The content of each Learning Area Statement guides the Grade R teacher’s planning so as to make provision for learning activities that will fulfil the Learning Area’s requirements and expectations for Grade R (South Africa. DoE, 2002b, p. 10). The principles of “human rights, a healthy environment” and “social justice, outcomes-based education, a high level of skills and knowledge for all, clarity and accessibility and progression and integration”, are reflected in each Learning Area Statement (South Africa. DoE, 2002b, p. 10).

- ***Principles of the Revised National Curriculum Statement (RNCS)***

As stated above in paragraphs 3.2.3 and 3.2.1, both Curriculum 2005 and the RNCS are strongly rooted in the Constitution. It must be remembered that the RNCS is not a new curriculum, but one resulting from the revision and strengthening of Curriculum 2005 (South Africa. DoE, 2002b, p. 6). The RNCS differs from Curriculum 2005, by *explicitly* introducing in each Learning Area Statement five principles of the Constitution that need to be taken cognisance of in every classroom. These principles are:

- Social Justice, a Healthy Environment, Human Rights and Inclusivity
- Outcomes-Based Education
- A High Level of Skills and Knowledge for All
- Clarity and Accessibility
- Progression and Integration. (South Africa. DoE, 2002b, pp. 10-13)

According to the Overview (South Africa. DoE, 2002b), the curriculum plays an important role in providing opportunities for learners to engage in activities in which “human rights, social justice and inclusivity” are actively promoted and a “healthy environment” is being respected, developed and supported (p. 10). Learners need to be made aware of their human rights on a daily basis, in order for them to protect themselves. “In simple terms, **social justice** refers to one’s responsibility to care for others to the common good of society” (South Africa. Department of Education [DoE], 2002b, p. 6). It is important for learners to be aware of each human being’s right to have an equal opportunity to improve his or her living conditions in order to have a healthy environment. The curriculum “attempts to be sensitive to issues of poverty, inequality, race, gender, age, disability, and such challenges as HIV/AIDS” (South Africa. DoE, 2002b, p. 10). An inclusive approach is insisted upon in all schools, in terms of which provision is made to enhance and develop the “social, emotional and physical needs of all learners” (South Africa. DoE, 2002b, p. 10). “Schools are encouraged to create cultures and practices that ensure the full participation of all learners irrespective of their culture, race, language, economic background and ability. All learners come with their own experiences, interests, strengths and barriers to learning which need to be accommodated” (South Africa, DoE, 2003b, p. 6).

The principle of outcomes-based education is not new to South African educators. Similar to Curriculum 2005, the RNCS is shaped by critical and developmental outcomes “that are derived from the Constitution and are contained in the South African Qualifications Act (1995). They describe the kind of citizen the education and training system should aim to create” (South Africa. DoE, 2002b, p. 11) (see Figure 3.2, above: the same critical and developmental outcomes applicable to Curriculum 2005 are now also applicable to the RNCS).

Curriculum 2005 advocated a “learner-centred”, learner-paced and learner-based approach to teaching (South Africa. DoE, 1997a, pp. 7, 12). An outcomes-based approach stresses that both the learning process and the end product are important. The RNCS emphasises that “[o]utcomes-based education forms the foundation of the curriculum in South Africa” (South Africa. DoE, 2002a, p. 1).

The decision to revise the phase-specific outcomes and assessment criteria of Curriculum 2005 and to replace them with learning outcomes and grade-specific assessment standards in the RNCS was a major deviation from Curriculum 2005. The learning outcomes which need to be mastered by each learner at the end of the learning process *in a specific grade* are explicitly spelt out in the Learning Area Statements of the RNCS. “By means of the Learning Area Statements, the Revised National Curriculum Statement identifies the goals, expectations and outcomes to be achieved through related learning outcomes and assessment standards” (South Africa. DoE, 2002b, pp. 11-12). The confusion that Grade R teachers experienced regarding Curriculum 2005 in not knowing what to teach in an outcomes-based education numeracy approach has therefore been addressed.

The third principle of the RNCS, namely “a high level of skills and knowledge for all:, is derived from the outcomes-based approach, which emphasises that knowledge, skills, values and attitudes are important when a teacher plans her lessons. During the implementation of Curriculum 2005, Grade R teachers were uncertain as to what skills and knowledge to teach, as the syllabus was not grade specific, but phase specific. The RNCS makes it clear “by specifying the combination of minimum knowledge and skills to be achieved by learners in each grade and setting high, achievable standards in all the Learning Areas” (South Africa. DoE, 2002b, p. 12). Although a set of minimum standards is laid down, this does not mean that a teacher need only comply in her planning with such minimum standards. The Grade R teacher needs to use the minimum assessment standards as a basis for determining how to assist learners who are currently not in the position of reaching the minimum assessment standards. Once the minimum standards have been reached, the Grade R teacher needs to enrich the learning process so as to go beyond the minimum assessment standards.

The fourth principle of the RNCS, namely clarity and accessibility, adheres to the brief of the Review Committee to make Curriculum 2005 clearer and more user-friendly. Clarity refers to the important plea from teachers concerning precisely what knowledge, skills, values and attitudes were to be taught in every grade. Therefore, “Two design features – learning outcomes and assessment standards – clearly define for all the learners the goals and outcomes necessary to proceed to

each successive level of the system” (South Africa. DoE, 2002b, p. 12). Accessibility refers to the availability of the *Revised National Curriculum Statement* in eleven “official languages and Braille” (South Africa. DoE, 2002b), as well as the fact that the language is clear and specific enough for every teacher to understand (p.12). The fact that the RNCS was published as nine separate documents makes it user-friendly.

The final principle deals with progression and integration. Integration, again, is no stranger to teachers as it is an important feature of outcomes-based education. To ensure that knowledge is not transmitted in a fragmented nature, it is important to integrate material within and across Learning Areas (South Africa. Department of Education, [DoE], 2003c, p. 6):

Integration ensures that learners experience the Learning Areas as linked and related. It supports and expands their opportunities to attain skills, acquire knowledge and develop attitudes and values encompassed across the curriculum. (South Africa. DoE, 2002b, p. 13)

The RNCS recommends that integration happens naturally and is not forced:

The key, however, is the balance to be struck between integration and conceptual progression. That is, integration must support conceptual development rather than being introduced for its own sake. (South Africa. DoE, 2003c, p. 6)

Conceptual progression refers to the assessment standards in each Learning Area. These assessment standards differ from grade to grade as they spell out the conceptual progression that needs to take place in a specific grade.

- ***Learning Area Statements, Learning Outcomes and Assessment Standards***  
The RNCS consists of “eight Learning Area Statements” and “an Overview” document (South Africa. DoE, 2002a, p. 2). The Learning Area specifies Assessment Standards for each grade (Grades R-9) in order for learners to master

and achieve the Learning Outcomes for that specific Learning Area Statement. The *Revised National Curriculum Statement Grades R-9 (Schools) Mathematics* (South Africa. DoE, 2002a) emphasises that

Each Learning Area Statement's Assessment Standards show how conceptual and skill development can take place over time. Assessment Standards can be integrated within grades as well as across grades. The achievement of an optimal relationship between integration across Learning Areas (where necessary and educationally sound), and conceptual progression from grade to grade, are central to this curriculum. (p. 2)

The eight "Learning Area Statements" refer to "Mathematics, Languages, Natural Sciences, Social Sciences, Arts and Culture, Life Orientation, Economic and Management Sciences, and Technology" (South Africa. DoE, 2002a, p. 2).

It is important to have a clear understanding of what the learning outcomes and assessment standards mean and entail. Learning outcomes have direct links with the critical and developmental outcomes. A learning outcome depicts the knowledge, skills and values a learner needs to know and demonstrate at the end 'of the General Education and Training band' (South Africa. DoE, 2002b, p. 14).

The assessment standards "describe the minimum level" at which learners should demonstrate their achievement of the learning outcome(s) and the ways ("depth and breadth") of demonstrating their achievement (South Africa. DoE, 2002b, p. 14). The assessment standards inform teachers how a learning outcome must be achieved in a specific grade.

The difference between a learning outcome and an assessment standard is that the learning outcome focuses on what learners should know and do, whilst the assessment standard describes "the minimum level, depth and breadth of what is

to be learnt” (South Africa. DoE, 2002b, p. 14). The learning outcomes are the same for all the grades, whilst assessment standards, because of the principle of conceptual progression, are different from grade to grade. Neither the learning outcomes nor the assessment standards prescribe what content or method the teacher must use to ensure that the learner is able to realise the learning outcomes (South Africa. DoE, 2002b, p. 14).

- ***The Learning Area: Mathematics***

The RNCS Overview document (South Africa. DoE, 2002b) defines mathematics as

a human activity that involves observing, representing and investigating patterns and quantitative relationships in physical and social phenomena and between mathematical objects themselves. Through this process new mathematical ideas and insights are generated. (p. 21)

Expanding on this definition, the RNCS (South Africa. DoE, 2002a) observes that mathematics “uses its own specialised language that involves symbols and notations for describing numerical, geometric and graphical relations” (p. 4). A coherent structure is created by the fact that mathematical concepts build upon one another (South Africa. DoE, 2002a, p. 4). The *RNCS Overview* (South Africa. DoE, 2002b) concludes its definition of mathematics by stating that

Mathematics is a product of investigation by different cultures; it is a purposeful activity in the context of social, political and economic goals and constraints. It is not value-free or culturally-neutral. (p. 21)

Mathematical knowledge involves “numbers, operations and relationships; patterns, functions and algebra; space and shape (geometry); measurement and data handling” (South Africa. DoE, 2002a, p. 4). Mathematical skills focus on:

- Representation and interpretation;
- Estimation and calculation;
- Reasoning and communication;
- Problem posing;
- Problem solving and investigation; and
- Describing and analysing. (South Africa. DoE, 2002a, p. 4)

The *RNCS Mathematics Learning Area Statement* (South Africa. DoE, 2002a) relates the purpose of mathematics directly to the Constitution and the citizen of a democratic South Africa that it envisages:

Being mathematically literate enables persons to contribute to and participate with confidence in society. Access to Mathematics is, therefore, a human right in itself. (p. 4)

The RNCS aims to develop a learner who is being taught Mathematics to be:

- Critical and aware of how mathematical relationships are used in social, environmental, cultural and economic relations;
- Confident, competent and without fear in handling mathematical situations;
- Appreciative of the beauty and elegance of Mathematics;
- Curious; and
- Having a passion for Mathematics. (p. 4)

The *RNCS Mathematics Learning Area Statement* (South Africa. DoE, 2002a) envisages that learners will subsequently:

- develop an awareness of the diverse historical, cultural and social practices of Mathematics;
- recognise that Mathematics is a creative part of human activity;
- develop deep conceptual understandings in order to make sense of Mathematics; and
- acquire the specific knowledge and skills necessary for:
  - the application of Mathematics to physical, social and mathematical problems,
  - the study of related subject matter (e.g. other Learning Areas), and
  - further study in Mathematics. (p. 5)

In Mathematics, learners need to work “with numbers, data, space and shape” (South Africa. DoE, 2002a, p. 5). Therefore, a learner needs to acquire and practise mathematical skills such as how to visualise, measure, order, calculate, estimate, interpret, making informed choices; how to compare, contrast, classify and represent confidently and accurately (South Africa. DoE, 2002a, p. 5).

The second feature of Mathematics teaching and learning is that a learner should identify and apply all problem-solving steps, which include “making sense of the problem, analysing and synthesising, and determining and executing solution strategies, as well as validating and interpreting the solutions appropriate to the context” (South Africa. DoE, 2002a, p. 5).

The third unique feature of learning and teaching Mathematics is the subject’s investigation of patterns and relationships which requires the skills of “describing, conjecturing, inferring, deducing, reflecting, generalising, predicting, explaining,

specialising, defining, modelling, justifying and representing” (South Africa. DoE, 2002a, p. 5).

It is important to remember that all five mathematical “Learning Outcomes and their Assessment Standards are cognitively dependent on and supportive of each other” (South Africa. DoE, 2002a, p. 6). Each specific grade’s assessment standards build onto the previous grade’s assessment standards in order to ensure that progression of knowledge, skills and values take place within a phase. The learning outcomes and their assessment standards for mathematics are:

❖ ***Mathematics Learning Outcome 1: Numbers, Operations and Relationships***

The learner will be able to recognise, describe and represent numbers and their relationships, and to count, estimate, calculate and check with competence and confidence in solving problems. (South Africa. DoE, 2002a, p. 7)

The RNCS (South Africa. DoE, 2002a) announces that the focus of Learning Outcome 1 is to build a learner’s number sense as well as to develop his or her comprehension of:

- what different kinds of numbers mean;
- how different kinds of numbers relate to one another;
- the relative size of different numbers;
- how different numbers can be thought about and represented in various ways; and
- the effect of operating with numbers. (p. 7)

In order for a number sense to be developed, insight and the grasp of basic number facts, the skills for competent and precise computation and measurement, and strategies for estimation and ensuring that the findings are correct, need to be firmly in place (South Africa. DoE, 2002a, p. 7). As a result it is important that contexts be carefully selected to provide the learner with opportunities to practise the skills of counting, estimation and calculation. However, these contexts need also to enhance integration with other Learning Areas, “as well as human rights, social, economic, cultural, political and environmental issues” (South Africa. DoE, 2002a, p. 8).

The Foundation Phase focus in Learning Outcome 1 emphasises the development of a sense of the range of numbers. It is envisaged that by the end of Grade 3 learners will have a number concept of “to at least 1 000, as well as unitary and non-unitary common fractions” (South Africa. DoE, 2002a, p. 8). It is important that learners become familiar with this range of numbers by being actively engaged in hands-on counting activities and “through working with physical objects in order to count collections of objects, partition and combine quantities, skip count in various ways, solve contextual (word) problems, and build up and break down numbers” (South Africa. DoE, 2002a, p. 8). The teacher needs to make provision in her lesson plans for activities such as working with “number cards, number charts and number-lines” in order to teach learners to “recognise, read, write, count and order number” (South Africa. DoE, 2002a, p. 8). Daily opportunities for saying the number names aloud as well as writing numbers in words and symbols need to take place during the allocated time for the Learning Programme Numeracy. Provision must be made for learning activities whereby learners “can count by rote and recognise and say number names and symbols for larger numbers than the learner is able to use for calculations and solving problems” (South Africa. DoE, 2002a, p. 8). Each learner needs to have sufficient opportunities to practise and master mental calculations. The teacher needs to “encourage the learner to appreciate and learn number names and symbols in the mother tongue (if not the language of instruction) and at least one other local language; and encourage the learner to judge the reasonableness of answers”

(South Africa. DoE, 2002a), p. 8). The RNCS (South Africa. DoE, 2002a) concludes the Foundation Phase focus by stating that fraction concepts can be developed by making use of shared physical quantities and making drawings of fraction problems (p. 8):

Problems should include solutions that result in whole number remainders or fractions. Sharing should involve not only finding parts of wholes, but also finding parts of collections of objects. In this phase, the learner is not expected to read or write fraction symbols. (South Africa. DoE, 2002a, p. 8)

In order to unpack Mathematical Learning Outcome 1, Foundation Phase teachers, including Grade R teachers, need to look at the Assessment Standards for each grade. See Table 3.1 for an overview of the Assessment Standards that are to be covered in each grade when teachers deal with Mathematics Learning Outcome 1.

**Table 3.1 Overview of Assessment Standards for Mathematics Learning Outcome 1**

| Grade R  | Grade 1  | Grade 2  | Grade 3  |
|--|--|--|--|
| <p>“Counts to at least 10 everyday objects reliably.</p> <p>Says and uses number names in familiar contexts.</p> <p>Knows the number names and symbols for 1 to 10.</p> <p>Orders and compares collections of objects using the words ‘more’, ‘less’ and ‘equal’.</p> <p>Solves and explains solutions to practical problems that involve equal sharing and grouping with whole numbers for at least 10 and with solutions that include remainders.</p> <p>Solves verbally-stated additions and subtraction problems with single-digit numbers and with solutions to at least 10.</p> <p>Uses the following techniques:</p> <ul style="list-style-type: none"> <li>▪ building up and breaking down numbers to at least 10;</li> <li>▪ doubling and halving to at least 10;</li> <li>▪ using concrete apparatus (e.g. counters).</li> <li>▪ Explains own solutions to problems</li> </ul> | <p>Counts to at least 34 everyday objects reliably.</p> <p>Counts forwards and backwards in:</p> <ul style="list-style-type: none"> <li>▪ ones from any number between 0 and 100;</li> <li>▪ tens from any multiple of 10 between 0 and 100.</li> </ul> <p>Knows and reads number symbols from 1 to at least 100 and writes number names from 1 to at least 34.</p> <p>Orders, describes and compares whole numbers to at least 2-digit numbers</p> <p>Solves money problems involving totals and change in rands and cents.</p> <p>Solves and explains solutions to practical problems that involve equal sharing and grouping with whole numbers to at least 34 and with solutions that include remainders.</p> <p>Can perform calculations, using appropriate symbols, to solve problems involving:</p> <ul style="list-style-type: none"> <li>▪ addition and subtraction with whole numbers and solutions to at least 34;</li> <li>▪ repeated addition with whole numbers and with solutions to at least 34;</li> <li>▪ estimation.</li> </ul> <p>Performs mental calculations involving addition and subtraction for numbers to at least 10.</p> <p>Uses the following techniques:</p> <ul style="list-style-type: none"> <li>▪ building up and breaking down numbers;</li> <li>▪ doubling and halving;</li> <li>▪ using concrete apparatus (e.g. counters);</li> <li>▪ number-lines.</li> </ul> <p>Explains own solutions to problems.<br/>Checks the solution given to problems by peers.</p> | <p>Counts to at least 100 everyday objects reliably.</p> <p>Counts forwards and backwards in:</p> <ul style="list-style-type: none"> <li>▪ ones from any number between 0 and 200;</li> <li>▪ tens from any multiple of 10 between 0 and 200;</li> <li>▪ fives from any multiple of 5 between 0 and 200;</li> <li>▪ twos from any multiple of 2 between 0 and 200.</li> </ul> <p>Knows and reads number symbols from 1 to at least 200 and writes number names from 1 to at least 100.</p> <p>Orders, describes and compares the following numbers:</p> <ul style="list-style-type: none"> <li>▪ whole numbers to at least 2-digit numbers.</li> <li>▪ common fractions including halves and quarters.</li> </ul> <p>Recognises the place value of digits in whole numbers to at least 2-digit numbers.</p> <p>Solves money problems involving totals and change in rands and cents.</p> <p>Solves and explains solutions to practical problems that involve equal sharing and grouping and that lead to solutions that also include unitary fractions (e.g. <math>\frac{1}{4}</math>).</p> <p>Can perform calculations, using appropriate symbols, to solve problems involving:</p> <ul style="list-style-type: none"> <li>▪ addition and subtraction of whole numbers with at least 2 digits;</li> <li>▪ multiplication of whole 1-digit by 1-digit numbers with solutions to at least 50;</li> <li>▪ estimation.</li> </ul> <p>Performs mental calculations involving:</p> <ul style="list-style-type: none"> <li>▪ addition and subtraction for numbers to at least 20;</li> <li>▪ multiplication of whole numbers with solutions to at least 20.</li> </ul> <p>Uses the following techniques:</p> <ul style="list-style-type: none"> <li>▪ building up and breaking down numbers;</li> <li>▪ doubling and halving;</li> <li>▪ using concrete apparatus (e.g. counters)</li> <li>▪ number-lines.</li> </ul> <p>Explains own solutions to problems.<br/>Checks the solution given to problems by peers.</p> | <p>Counts forwards and backwards in:</p> <ul style="list-style-type: none"> <li>▪ the intervals specified in Grade 2 with increased number ranges;</li> <li>▪ twenties, twenty-fives, fifties and hundreds between 0 and at least 1 000</li> </ul> <p>Knows number names from 1 to at least 10 in the mother tongue (if not the language of learning and teaching) and one other local language).</p> <p>Knows, reads and writes number symbols and names from 1 to at least 1 000.</p> <p>Orders, describes and compares the following numbers:</p> <ul style="list-style-type: none"> <li>▪ whole numbers to at least 3-digit numbers;</li> <li>▪ common fractions including halves, quarters and thirds</li> </ul> <p>Recognises the place value of digits in whole numbers to at least 3-digit numbers.</p> <p>Solves money problems involving totals and change in rands and cents, including converting between rands and cents.</p> <p>Solves and explains solutions to practical problems that involve equal sharing and grouping and that lead to solutions that also include unitary and non-unitary fractions (e.g. <math>\frac{1}{4}</math>, <math>\frac{3}{4}</math>).</p> <p>Can perform mental calculations involving:</p> <ul style="list-style-type: none"> <li>▪ addition and subtraction of whole numbers with at least 3 digit;</li> <li>▪ multiplication of at least-whole 2-digit numbers by 1-digit numbers.</li> <li>▪ division of at least whole 2-digit by 1-digit numbers;</li> <li>▪ estimation.</li> </ul> <p>Performs mental calculations involving:</p> <ul style="list-style-type: none"> <li>▪ addition and subtraction for numbers to at least 50;</li> <li>▪ multiplication of whole numbers with solutions to at least 50</li> </ul> <p>Uses the following techniques:</p> <ul style="list-style-type: none"> <li>▪ building up and breaking down numbers;</li> <li>▪ doubling and halving;</li> <li>▪ number-lines;</li> <li>▪ rounding off in tens.</li> </ul> <p>Explains own solutions to problems.<br/>Checks the solution given to problems by peers”.</p> |

(South Africa. DoE, 2002a, pp. 14, 20-23).

❖ *Mathematics Learning Outcome 2: Patterns, Functions and Algebra*

The learner will be able to recognise, describe and represent patterns and relationships, as well as to solve problems using algebraic language and skills. (South Africa. DoE, 2002a, p. 9)

According to the RNCS (South Africa. DoE, 2002a), Learning Outcome 2 describes Algebra as “the language for investigating and communicating most of Mathematics” (p. 9). It focuses on

describing patterns and relationships through the use of symbolic expressions, graphs and tables; and identifying and analysing regularities and change in patterns and relationships that enable learners to make predictions and solve problems. (South Africa. DoE, 2002a, p. 9)

It is necessary to take cognisance of the fact that mathematical skills, such as “generalising, explaining, describing, observing, inferring, specialising, creating, justifying, representing, refuting and predicting” need time to develop and to be mastered with confidence (South Africa. DoE, 2002a, p. 9).

It is essential that the teacher provides sufficient opportunities for learners to acquire the above-mentioned skills, in the process selecting contexts “in which the learner can use algebraic language and skills to describe patterns and relationships in a way that builds awareness of other Learning Areas, as well as human rights, social, economic, cultural, political and environmental issues” (South Africa. DoE, 2002a, p. 9).

The Foundation Phase focus in Learning Outcome 2 rests upon ensuring that a foundation is being laid for introducing algebra in the latter phases. It is therefore important that Foundation Phase learners are exposed to opportunities for physical engagement with and/or manipulation of objects, as well as opportunities for drawing objects in order to copy, extend, create or describe geometric and numeric patterns. (South Africa. DoE, 2002a, p. 9)

Learners need to demonstrate knowledge and competence to meet the following Assessment Standards in order to achieve Mathematical Learning Outcome 2. See Table 3.2 for an overview of Assessment Standards which are to be covered in each grade when teachers deal with Mathematics Learning Outcome 2.

**Table 3.2 Overview of Assessment Standards for Mathematics Learning Outcome 2**

| Grade R  | Grade 1  | Grade 2  | Grade 3   |
|--|--|--|---|
| <p>“Copies and extends simple patterns using physical objects and drawings (e.g. using colours and shapes).</p> <p>Creates own patterns.</p> | <p>Copies and extends simple patterns using physical objects and drawings (e.g. using colours and shapes).</p> <p>Copies and extends simple number sequences to at least 100.</p> <p>Creates own patterns.</p> <p>Describes observed patterns.</p> <p>Identifies, describes and copies geometric patterns in natural and cultural artefacts of different cultures and times.</p> | <p>Copies and extends simple patterns using physical objects and drawings.</p> <p>Copies and extends simple number sequences to at least 20.</p> <p>Creates own patterns.</p> <p>Describes observed patterns</p> <p>Identifies, describes and copies geometric patterns in natural and cultural artefacts of different cultures and times.</p> | <p>Copies and extends simple patterns using physical objects and drawings.</p> <p>Copies and extends simple number sequences to at least 1 000.</p> <p>Creates own patterns.</p> <p>Describes observed patterns.</p> <p>Identifies, describes and copies geometric patterns in natural and cultural artefacts of different cultures and times”.</p> |

(South Africa. DoE, 2002a, pp. 15, 24-25).

❖ ***Mathematics Learning Outcome 3: Space and Shape (Geometry)***

The learner will be able to describe and represent characteristics and relationships between two-dimensional shapes and three-dimensional objects in a variety of orientations and positions. (South Africa. DoE, 2002a, p. 10)

The focus of the third Learning Outcome is on “properties, relationships, orientation, positions and transformations of two-dimensional shapes and three-dimensional objects” (South Africa. DoE, 2002a, p. 10). In order for learners to master these skills they need to be actively involved with concrete objects, drawing and constructing “the abstract justification of spatial relationships” (South Africa. DoE, 2002a, p. 10). The Foundation Phase focus of Learning Outcome 3 does not only encourage a hands-on approach to the manipulation and handling of space and shape, but emphasises that learners need to recognise and describe objects and shapes in the environment that can look like or have the same features as mathematical objects and shapes (South Africa. DoE, 2002a, p. 10). Skills such as handling, building, manipulating, cutting out, drawing and describing shapes and objects and their positions are important. Although physical movement is crucial in experiencing directionality, the Foundation Phase learner needs also to be able to verbalise the direction and position in space (South Africa. DoE, 2002a, p. 10).

See Table 3.3 for an overview of the Assessment Standards which are to be covered in each grade when teachers deal with Mathematics Learning Outcome 3.

**Table 3.3 Overview of Assessment Standards for Mathematics Learning Outcome 3**

| Grade R   | Grade 1   | Grade 2  | Grade 3   |
|---|---|--|---|
| <p>“Recognises, identifies and names three-dimensional objects in the classroom and in pictures, including:</p> <ul style="list-style-type: none"> <li>▪ boxes (prisms);</li> <li>▪ balls (spheres).</li> </ul> <p>Describes, sorts and compares physical three-dimensional objects according to:</p> <ul style="list-style-type: none"> <li>▪ size;</li> <li>▪ objects that roll;</li> <li>▪ objects that slide.</li> </ul> <p>Builds three-dimensional objects using concrete materials (e.g. building blocks).</p> <p>Recognises symmetry in self and own environment (with focus on front and back).</p> <p>Describes one three-dimensional object in relation to another (e.g. ‘in front of’, or ‘behind’).</p> <p>Follows directions (alone and/or as a member of a group or team) to move or place self within the classroom (e.g. ‘at the front’ or ‘at the back’).</p> | <p>Recognises, identifies and names two-dimensional shapes and three-dimensional objects in the classroom and in pictures including:</p> <ul style="list-style-type: none"> <li>▪ boxes (prisms) and balls (spheres);</li> <li>▪ triangles and rectangles;</li> <li>▪ circles.</li> </ul> <p>Describes, sorts and compares physical two-dimensional shapes and three-dimensional objects according to:</p> <ul style="list-style-type: none"> <li>▪ size;</li> <li>▪ objects that roll or slide;</li> <li>▪ shapes that have straight or round edges.</li> </ul> <p>Observes and builds given three-dimensional objects using concrete materials (e.g. building blocks and construction sets).</p> <p>Recognises symmetry in self and own environment (with focus on ‘left’, ‘right’, ‘front’ and ‘back’).</p> <p>Describes one three-dimensional object in relation to another (e.g. ‘in front of’ or ‘behind’).</p> <p>Follows directions (alone and/or as a member of a group or team) to move or place self within the classroom or three-dimensional objects in relation to each other</p> | <p>Recognises, identifies and names two-dimensional shapes and three-dimensional objects in the school environment and in pictures, including:</p> <ul style="list-style-type: none"> <li>▪ boxes (prisms), balls (spheres) and cylinders;</li> <li>▪ triangles, squares and rectangles;</li> <li>▪ circles.</li> </ul> <p>Describes, sorts and compares two-dimensional shapes and three-dimensional objects in pictures and the environment according to:</p> <ul style="list-style-type: none"> <li>▪ size;</li> <li>▪ objects that roll or slide;</li> <li>▪ shapes that have straight or round edges.</li> </ul> <p>Observes and creates given two-dimensional shapes and three-dimensional objects using concrete materials (e.g. building blocks, construction sets and cut-out two-dimensional shapes).</p> <p>Recognises symmetry in two-dimensional shapes and three-dimensional objects.</p> <p>Recognises three-dimensional objects from different positions.</p> <p>Positions self within the classroom or three-dimensional objects in relation to each other.</p> <p>Describes positional relationships (alone and/or as a member of a group or a team) between three-dimensional objects or self and a peer.</p> | <p>Recognises, identifies and names two-dimensional shapes and three-dimensional objects in the environment and in pictures, including:</p> <ul style="list-style-type: none"> <li>▪ boxes (prisms), balls (spheres) and cylinders;</li> <li>▪ triangles, squares and rectangles;</li> <li>▪ circles;</li> <li>▪ cones and pyramids.</li> </ul> <p>Describes, sorts and compares two-dimensional shapes and three-dimensional objects in pictures and the environment, including:</p> <ul style="list-style-type: none"> <li>▪ two-dimensional shapes in or on the faces of three-dimensional objects;</li> <li>▪ flat/straight and curved/round surfaces and edges.</li> </ul> <p>Observes and creates given and described two-dimensional shapes and three-dimensional objects using concrete materials (e.g. building blocks, construction sets, cut-out two-dimensional shapes, clay, drinking straws).</p> <p>Determines lines of symmetry in two-dimensional shapes using paper folding and reflection.</p> <p>Recognises and describes three-dimensional objects from different positions.</p> <p>Reads, interprets and draws informal maps of the school environment or of an arrangement of three-dimensional objects and locates objects on the map.</p> <p>Describes positional relationships (alone and/or as a member of a group or team) between three-dimensional objects or self and a peer”.</p> |

(South Africa. DoE, 2002a, pp. 16, 26-27).

❖ *Mathematics Learning Outcome 4: Measurement*

The learner will be able to use appropriate measuring units, instruments and formulae in a variety of contexts. (South Africa. DoE, 2002a, p. 11)

In the Foundation Phase, Learning Outcome 4 requires learners to be exposed to a variety of contexts in which measurement activities can be practically experienced by using different and various concrete objects and shapes. “These investigations should happen through making direct comparisons and using non-standardised measuring units” (South Africa. DoE, 2002a, p. 11). Although the focus of measuring activities should be concretely experienced by the learner, it is also important that the learner learns the appropriate vocabulary to describe his or her estimations, predictions and conclusions. The concept of time forms part of Learning Outcome 4. Activities relating to time need to be practically experienced by young learners in order for them to be aware of the passing of time, before they are taught to read time. (South Africa. DoE, 2002a, p. 11)

Assessment standards which need to be dealt with under Learning Outcome 4 are summarised in Table 3.4.

**Table 3.4 Overview of Assessment Standards for Mathematics Learning Outcome 4**

| Grade R   | Grade 1  | Grade 2   | Grade 3   |
|---|--|---|---|
| <p>“Describes the times of day in terms of day or night</p> <p>Orders recurring events in own daily life.</p> <p>Sequences events within one day.</p> <p>Works concretely comparing and ordering objects using appropriate vocabulary to describe:</p> <ul style="list-style-type: none"> <li>▪ mass (e.g. light, heavy, heavier);</li> <li>▪ capacity (e.g. empty, full, less than, more than);</li> <li>▪ length (e.g. longer, shorter, wider, tall, short).</li> </ul> | <p>Describes the time of day using vocabulary such as ‘early’, ‘late morning’, ‘afternoon’ and ‘night’.</p> <p>Compares events in term of the length of time they take (longer, shorter, faster, slower).</p> <p>Sequences events using language such as ‘yesterday’, ‘today’ and ‘tomorrow’.</p> <p>Places birthdays on a calendar.</p> <p>Estimates, measures, compares and orders three-dimensional objects using non-standard measures:</p> <ul style="list-style-type: none"> <li>▪ mass (e.g. bricks, sand bags);</li> <li>▪ capacity (e.g. spoons, cups);</li> </ul> <p>length (e.g. hand spans, footsteps)</p> | <p>Reads analogue and digital clock in hours and minutes.</p> <p>Names in orders the days of the week and the month of the year.</p> <p>Calculates elapsed time in:</p> <ul style="list-style-type: none"> <li>▪ hours and minutes using clocks;</li> <li>▪ days, weeks and months using calendars.</li> </ul> <p>Sequences events according to days, weeks, months and years.</p> <p>Identifies important days on calendars including dates of:</p> <ul style="list-style-type: none"> <li>▪ religious festivals;</li> <li>▪ historical events.</li> </ul> <p>Estimates, measures, compares and orders three-dimensional objects using non-standard measures:</p> <ul style="list-style-type: none"> <li>▪ mass (e.g. bricks, sand bags);</li> <li>▪ capacity (e.g. spoons, cups)</li> </ul> <p>length (e.g. hand spans, footsteps).</p> | <p>Reads and writes analogue and digital clock time in terms of hours, half-hours, quarters of an hour and minutes.</p> <p>Solves problems involving calculations with and conversions between:</p> <ul style="list-style-type: none"> <li>▪ minutes – hours;</li> <li>▪ hours – days;</li> <li>▪ days – months.</li> </ul> <p>Identifies important dates on calendars including dates of:</p> <ul style="list-style-type: none"> <li>▪ religious festivals;</li> <li>▪ historical events.</li> </ul> <p>Recognises and describes different calendars used in different cultures.</p> <p>Estimates, measures, compares and orders three-dimensional objects using non-standard and standard measures:</p> <ul style="list-style-type: none"> <li>▪ mass(e.g. packets, kilograms);</li> <li>▪ capacity (e.g. bottles, litres);</li> <li>▪ length (e.g. desk lengths, metres).</li> </ul> <p>Investigates (alone and/or as a member of a group or a team) and approximates:</p> <ul style="list-style-type: none"> <li>▪ distance around two-dimensional shapes using string;</li> <li>▪ area of two-dimensional shapes using tiling”.</li> </ul> |

(South Africa. DoE, 2002a, pp. 17, 28-29).

❖ **Mathematics Learning Outcome 5: Data Handling**

The learner will be able to collect, summarise, display and critically analyse data in order to draw conclusions and make predictions, and to interpret and determine chance variation. (South Africa. DoE, 2002a, p. 30)

Assessment standards which need to be dealt with under Learning Outcome 5 are summarised in Table 3.5.

**Table 3.5 Overview of Assessment Standards for Mathematics Learning Outcome 5**

| Grade R  | Grade 1  | Grade 2   | Grade 3  |
|--|--|---|--|
| <p>“Collects physical objects (alone and/or as a member of a group or team) in the environment according to stated features (e.g. collects 10 dead flowers).</p> <p>Sorts physical objects according to one attribute (property) (e.g. red shapes).</p> <p>Draws a picture as a record of collected objects.</p> <p>Answers questions (e.g. ‘Which has the most ...?’) based on own picture or own sorted objects.</p> | <p>Collects everyday objects (alone and/or as a member of a group or team) in the classroom and school environment according to given criteria or categories.</p> <p>Sorts physical objects according to one attribute chosen for a reason (e.g. ‘Sort crayons into colours.’).</p> <p>Gives reasons for collections being grouped in particular ways.</p> <p>Draws a picture as a record of collected objects.</p> <p>Constructs pictographs where stickers or stamps represent individual elements in a collection of objects.</p> <p>Describes own collection of objects, explain how it was sorted and answers questions about it.</p> | <p>Collects data (alone and/or as a member of a group or team) in the classroom and school environment to answer questions posed by the teacher (e.g. ‘How many learners are there in each classroom?’).</p> <p>Sorts physical objects according to one attribute chosen by the teacher.</p> <p>Gives reasons for collections being grouped in particular ways.</p> <p>Draws pictures and constructs pictographs that have a 1-1 correspondence between own data and representations.</p> <p>Describes own or a peer’s collection of objects, explains how it was sorted, and answers questions about it.</p> | <p>Collects data (alone and/or as a member of a group or team) in the classroom and school environment to answer questions posed by the teacher and class (e.g. ‘How many learners walk to school?’).</p> <p>Sorts, orders and organises own and supplied data by one or more attributes for a particular reason.</p> <p>Draws pictures and constructs pictographs and bar graphs that have a 1-1 correspondence between own data and representation.</p> <p>Reads, interprets and reports on information in own and a peer’s representations of data.</p> <p>Reads and interprets data presented in simple tables and lists”.</p> |

(South Africa. DoE, 2002a, pp. 18, 30-31).

- **Planning**

In order to implement the RNCS Foundation Phase teachers need to make use of different stages of planning, namely “Learning Programmes, Work Schedules and Lesson Plans” (South Africa. DoE, 2003c, p. 2).

The first stage of planning consists of Learning Programmes, which do not only give an overview of all the Learning Outcomes and Assessment Standards which will be covered in a year by a grade, but also provide an indication of which content-in-contexts will be used, as well as all the resources needed for such learning activities to take place. The *RNCS Overview* (South Africa. DoE, 2002b) defines Learning Programmes as “structured and systematic arrangements of activities that promote the learning outcomes and assessment standards for the phase” (p. 15). The *RNCS Teacher’s Guide for the Development of Learning Programmes Foundation Phase* (South Africa. DoE, 2003c) emphasises that a Learning Programme is more than just a specific grade’s year plan (pp. 2-3). It entails planning for a whole phase for a year, which means that the Grade R, 1, 2 and 3 teachers of a school need to plan together a Learning Programme for the Foundation Phase.

**A Learning Programme** is a **phase-long plan** that provides a framework for planning, organising and managing classroom practice for each phase. (South Africa. DoE, 2003b, p. 2)

Integration within and across other Learning Areas needs to be reflected in a comprehensive, balanced and sequential manner in the Learning Programme (South Africa. DoE, 2003b, p. 2).

The Learning Programme thus interprets and sequences the Learning Outcomes and Assessment Standards as spelt out in the RNCS into

planned teaching, learning and assessment activities for a phase. It spells out what core knowledge and concepts will be used in attaining the Learning Outcomes for the phase. It plans for how different contexts and local realities, like the needs of the community, school and learners, will be considered. (South Africa. DoE, 2003b, p. 2)

Foundation Phase teachers need to consider the five principles as well as the values underlying the RNCS when they do their phase year-planning, based on the "three Learning Programmes" in the Foundation Phase, namely "Literacy, Numeracy and Life Skills" (South Africa. DoE, 2002b, p. 15).

Taking into account the brief of the Ministerial Review Committee, the national Department of Education published a *RNCS Teacher's Guide for the Development of Learning Programmes Foundation Phase* (South Africa. DoE, 2003b), which can be referred to by teachers when they are developing Learning Programmes. Each provincial Department of Education was encouraged to provide further provincial guidelines, and thus the Eastern Cape Department of Education provided their Foundation Phase teachers with additional guidelines to help them with implementing the RNCS in the Foundation Phase (South Africa. ECDoE, 2003a, 2003b, 2003c, 2005a, 2005b).

In order for Foundation Phase teachers to implement the "three Learning Programmes" of "Literacy, Numeracy and Life Skills" (South Africa. DoE, 2002b, p. 15), they need to know when to implement each programme and how much time should be spent on a daily basis on each learning programme. The teaching time for Literacy has therefore been formalised as "40%, Numeracy 35%" and "Life Skills 25%" (South Africa. DoE, 2002b, p. 17). The RNCS (South Africa. DoE, 2003b) breaks the 40% Literacy time into 9 hours 10 minutes per week or 1 hour 50 minutes per day for Grades R-2, whilst Grade 3 teachers implementing Literacy, should use 10 hours per week or 2 hours per day (pp. 31-

32). The learning programme Numeracy with its share of 35% is broken down to 7 hours 30 minutes per week or 1 hour 30 minutes per day for Grades R-2, while 8 hours 45 minutes per week or 1 hour 45 minutes per day should be spent on Numeracy in Grade 3 (South Africa. DoE, 2002b, p. 17). Grades R-2 teachers need to spend 5 hours 50 minutes per week or 1 hour 10 minutes per day on the learning Programme Life Skills in order to adhere to the recommendation that 25% of formal teaching time should be focussed on this learning programme (South Africa. DoE, 2002b, p. 17). Grade 3 teachers will spend 6 hours 15 minutes per week or 1 hour 15 minutes per day on Life Skills (South Africa. DoE, 2002b, p. 17). Note that the Grades R-2 timetable is 70 minutes per day shorter than the Grade 3 time-table.

The second stage of planning, Work Schedules, commences when teachers of the same grade in a school plan together a year-long programme, based on the Learning Programme:

[the Work Schedule] shows how teaching, learning and assessment will be sequenced and paced in a *particular grade*. It is a delivery tool, a means of working towards the achievement of the Learning Outcomes specified in the Learning Programme, and incorporates the Assessment Standards that will be achieved in that grade. (South Africa. DoE, 2003b p 2)

Teachers need to remember when compiling the Work Schedules to specify methods, tools and forms of assessment, as well as the various resources needed (South Africa. DoE, 2003b p 4). The Learning Outcomes and Assessment Standards of the Learning Programme need to be covered within four terms with the various content-in-contexts. Teachers need to specify which teaching and learning strategies they are going to use in a specific term, and indicate it on the Work Schedule.

The third stage of planning refers to the designing of Lesson Plans, for a shorter period of time, ranging “from a single activity to a term’s teaching, learning and assessment” (South Africa. ECDoE, 2005b, p. 51). Each class teacher is responsible for her own detailed and structured Lesson Plans, based on the Work Schedule for a specific term, which is again derived from the Learning Programme: “[the Lesson Plans] provide the day-to-day details for teaching and learning assessment” (South Africa. DoE, 2003b, p. 4).

In her Lesson Plans, the Foundation Phase teacher needs to include Learning Outcomes and Assessment Standards, derived from the Work Schedules, spontaneous and natural opportunities for the integration of Learning Outcomes and Assessment Standards across the Learning Areas, context-in-content, details of learning activities, details of assessment, resources needed as well as ways of surmounting barriers to learning. Finally, the teacher needs to reflect on her Lesson Plan (South Africa. ECDoE, 2005b, p. 57).

It is important to note that each Learning Programme will comprise a series of Work Schedules for four terms, together with Lesson Plans: for example, the Learning Programme Numeracy will have four Numeracy Work Schedules – one for each term – and various Numeracy Lesson Plans flowing from the Work Schedule for a specific term.

- **Assessment**

The *National Assessment Policy for Grades R-9 and ABET* (South Africa. Department of Education [DoE], 1998) describes assessment as “the process of identifying, gathering and interpreting information about a learner’s achievement, as measured against nationally agreed outcomes for a particular phase of learning.” (p. 3). The *National Protocol on Assessment for Schools in the General and Further Education and Training Band (Grades R-12)* (South Africa. Department of Education [DoE], 2005) emphasises that “Outcomes-based education forms the foundation of curriculum in South African schools, and the

assessment framework of the National Curriculum Statement (NCS) for Grades R-12 (schools) is based on the principles of outcomes-based education” (p. 5).

According to the RNCS (South Africa. DoE, 2002a):

The assessment framework of the Revised National Curriculum Statement Grades R-9 (Schools) is based on the principles of outcomes-based education. Assessment should provide indications of learner achievement in the most effective and efficient manner, and ensure that learners integrate and apply knowledge and skills. Assessment should also help students to make judgements about their own performance, set goals for progress and provoke further learning. (p. 93)

The assessment in an outcomes-based education classroom needs to be clearly stipulated and task-based as the learners need to know what they are going to be assessed on, before any teaching and learning activities start. The learners also need to know that the assessment of their progress will be based on demonstrated achievement. In order to make provision for the different learning styles and needs of learners, a variety of teaching and learning strategies and assessment methods and tools need to be used by the teacher. In enhancing each learner’s potential, enough time and support needs to be given to the learner by the teacher (South Africa. ECDoE, 2005b, p. 7).

The RNCS (South Africa. DoE, 2003b) encourages teachers to make use of criterion-based assessment in the Foundation Phase as it “ensures that assessment is open and fair to everyone. All learners are aware of what is expected of them prior to attempting a task in terms of the set criteria for the task” (p. 32). The teacher needs to guide learners towards mastering the learning outcomes and assessment standards, whilst the learners have to demonstrate the values and

attitudes, learn the knowledge or demonstrate the skills as stipulated in the Assessment Standards of each Learning Area (South Africa. DoE, 2002a, p. 94). The grade-specific Assessment Standards in each Learning Area Statement will give guidance to teachers as to what to assess Foundation Phase learners on at different ages and levels (South Africa, DoE, 2003b, p. 32).

Assessment is essential to outcomes-based education because it must be possible to assess when a learner has achieved what is required in each grade. (South Africa. DoE, 2002a, p. 93)

The RNCS (South Africa. DoE, 2002a) stresses that assessment and teaching must be integrated because “the information that the teacher gathers through assessing the learners must be used to guide teaching” (p. 60). The Work Schedules (by specifying the methods, tools and forms of assessment) and the Lesson Plans (which specify the details of assessment), must ensure that assessment forms an essential component of teaching and learning (South Africa. DoE, 2003b, p. 32). Continuous assessment or CASS is the main method of assessment recommended in the RNCS. Continuous assessment is defined as

a process of gathering valid and reliable information about the performance of the learner on an on-going basis, against clearly defined criteria, while using a variety of methods, tools, techniques and contexts. As such, it supports the growth and development of learners, provides constant feedback, and gathers evidence of learner achievement with regard to the Assessment Standards of the Learning Outcomes. (South Africa. DoE, 2002a, p. 95)

Summative assessment can be derived from an “accumulation of the results of continuous assessment activities” and thus “provide an overall picture of a learner’s progress at a given time” (South Africa. DoE, 2002a, p. 95).

The RNCS (South Africa. DoE, 2002a) concludes that

Assessment should provide indications of learner achievement in the most effective and efficient manner, and ensure that learners integrate and apply skills. Assessment should also help students to make judgments about their own performance, set goals for progress and provoke further learning. (p. 3)

- ***General Education and Training Certificate***

The General Education and Training Certificate for compulsory schooling is a whole qualification for schools based on the extent to which the learning outcomes are achieved through the Grade 9 assessment standards. (South Africa. DoE, 2002b, p. 19)

All teaching and learning as well as continuous assessment, from Grade R to Grade 9, contributes to a learner's meeting or not meeting the specified requirements of a *General Education and Training Certificate* at the end of Grade 9. Grades R-3, thus the Foundation Phase as a component of Early Childhood Development, forms the first phase of the first band (Grades R-9) of the *General Education and Training Certificate* of the National Qualifications Framework. The other phases include the *Further Education and Training Certificate* (Grades 10-12) and the *Higher Education and Training* band (certificates, diplomas and degrees offered by FET colleges and universities). "A qualification is awarded on completion of each of the NQF levels" (South Africa. DoE. 1997a, p. 30). Since 2009, a General Education and Training Certificate aligned to the Revised National Curriculum Statement has been issued to learners who have completed the learning outcomes of the Grade 9 assessment standards (South Africa. DoE, 2002a, p. 19).

### **3.3.2 *The National Curriculum Statement***

Although there was no official declaration or any documentation to announce that the name of the *Revised National Curriculum Statement* for Grades R-9 changed to the *National Curriculum Statement* in 2008, all Grade R-12 teachers were tasked to make use of the *National Curriculum Statement* as “the central policy document” in implementing the curriculum in their schools and classrooms (South Africa. DoE, 2009, p. 18). The Grade 12 class of 2008 was the first cohort of learners to complete the new curriculum and to qualify for the National Senior Certificate.

## **3.4 THE CURRICULUM AND ASSESSMENT POLICY STATEMENTS**

The conceptualisation of the currently proposed *Curriculum and Assessment Policy Statements* commenced when the Minister of Basic Education, Ms Motshekga, responded to requests by teachers, their unions, and other education stakeholders that her department investigate the implementation of the NCS, because the Grade 12 final examination results as well as systemic evaluations of Grades 3 and 6 had indicated that South African learners were not performing well.

### **3.4.1 *Report of the Task Team for the Review of the Implementation of the National Curriculum Statement***

Ms Motshekga established a task team with the brief to “investigate the nature and the challenges and problems experienced in the implementation of the National Curriculum Statement and to develop a set of recommendations designed to improve the implementation of the National Curriculum Statement” (South Africa. DoE, 2009, p. 5). After consultation with stakeholders, who included teachers and teacher unions, the task team presented its report to Ms Motshekga, who subsequently consulted with senior departmental officials and decided to implement the report’s recommendation of

a five-year plan to turn around learners' scholastic performance by 2014 (South Africa. DoE. 2009, p. 5).

In order to address the criticisms directed at the NCS, the task team made eight recommendations:

- The first recommendation advocates a plan that will give support to teachers in improving learner performance. This plan needs to be transparent and widely communicated as a “coherent, clear, simple *Five Year Plan to Improve Teaching and Learning* across the schooling systems” (South Africa. DoE, 2009, p. 7).

Mechanisms to monitor the implementation of the plan, through regular external monitoring to assess whether it has the desired effect on learner and teacher performance, need to be built into the plan. (South Africa. DoE, 2009, p. 7)

- The second recommendation highlights the need to have access to the curriculum via one comprehensive document in order to prevent confusion caused by “a plethora of policies, guidelines at all levels of the education systems, from the DOE down to provincial, district and Subject Advisor level” (South Africa. DoE, 2009, p. 7). This comprehensive national curriculum policy document will be known as the *Curriculum and Assessment Policy* (South Africa. DoE, 2009) and will include the milestones or developmental levels for Grades 1 to 3 regarding Literacy and Numeracy, as set out in the Foundation Phase Assessment Framework (p. 27). “*The Foundations for Learning Campaign* is a four-year campaign to create a national focus to improve the reading, writing and numeracy abilities of all South African children” (South Africa. DoE, 2008b). It was found by two Grade 3 Systemic Evaluation Reports of 2003 and 2008 that “South African children are not able to read, write and count at expected levels, and are unable to execute tasks that demonstrate key skills associated with Literacy and Numeracy” (South Africa. DoE, 2008b, p. 4).

The milestones (knowledge and skills) derived from the Learning Outcomes and Assessment Standards from the National Curriculum Statement for Languages and Mathematics (Grades 1-3) have been packaged into four terms for each grade to facilitate planning for teaching. These milestones explain the content embedded in the Learning Outcomes and Assessment Standards (South Africa. DoE, 2008c).

The task team proposed that these milestones should replace "learning outcomes and assessment standards" (South Africa. DoE, 2009, p. 46). The learning outcomes are "designed to apply across all grades from R to 12. This creates artificial similarities around what is learnt at different levels, and requires that the outcomes be specified in a general and often generic way" (South Africa. DoE, 2009, p. 45). In their criticism of OBE, the task team felt that assessment standards were "numerous, at times vague and limited in the extent to which they show progression. They also fail to specify the level at which students should be performing" (South Africa. DoE, 2009, p. 45). The task team appealed for a shift away from OBE and its focus on learning outcomes, partly because OBE has come to mean so many different things to different teachers.

The task team recommended that the comprehensive Curriculum and Assessment Policy documents

should be organised around the knowledge (**content, concepts and skills**) to be learnt, recommended **texts**, recommended **pedagogical approaches** and **assessment requirements**. The latter will specify the level at which content, concepts and skills are to be taught, and how and when they should be assessed. (South Africa. DoE, 2009, p. 49)

Although subject advisors play an important role in assisting and supporting teachers implementing the curriculum policy in the classroom, their knowledge and ability to render effective support were questioned by the task team. The task team was of the view that subject advisors added to the confusion surrounding policy material by drafting their own guidelines for implementation by teachers. In order to avoid such confusion, the third recommendation stresses that the roles and responsibilities of subject advisors as well as “the exact nature of in-classroom and school support they should provide to teachers” need to be clarified (South Africa. DoE, 2009, p. 8).

- The fourth recommendation addressed the challenge of the excessive time spent on planning and administration duties by teachers, which resulted in less time being available for teaching. The task team advised that from January 2010 teachers’ administrative workload, including planning, be reduced.

The three levels of planning should be rationalized and duplication in the process must be addressed. To minimize their time spent on planning and to ensure curriculum coverage and pacing, teachers should be encouraged to use good quality textbooks for their planning and scheduling. (South Africa. DoE, 2009, pp. 26-27)

- The fifth recommendation focussed on challenges being experienced with assessment. Due to the fact that in the GET phase “a new assessment policy was never developed to support the National Curriculum Statement”, confusion was experienced by both educators and parents regarding symbols being used in the absence of marks and percentages prior to Curriculum 2005, as well as uncertainty regarding “Common Tasks of Assessment, portfolios and research projects” (South Africa. DoE, 2009, p. 8). The task team advised that assessment requirements in the GET phase need to be similar to assessment requirements in the FET phase. The task team recommended further that the CTAs or “Common Tasks of Assessment” be replaced with “annual National Testing for all Grade 9 learners in Mathematics, Home Language and English” (South Africa. DoE, 2009, p. 9). The task team encouraged teachers to analyse the outcomes of the

systemic and national tests in order to plan intervention strategies to improve teaching and learning in their classrooms. The team recommended that “clear, simple and subject-specific assessment guidelines should be included in the *Curriculum and Assessment Policy* to replace complex and generic assessment requirements” (South Africa. DoE, 2009, p. 37).

- The sixth recommendation attempted to reduce the eight learning areas in the intermediate phase to six subjects, since learners in this phase, especially those in Grade 4, found it difficult to cope with so many learning areas having got used to three learning programmes in the foundation phase. The transition to the intermediate phase was further complicated by the fact that most intermediate learners were taught in English and not in their home language. The task team recommended therefore that English [First Additional Language] as a subject needs to be taught from Grade One in order to ensure that Grade Four learners are able to cope with English as the language of learning and teaching in the intermediate phase. In summary, the task team recommended that there be seven subjects in the intermediate phase, namely, “Home Language (English); First Additional Language; Mathematics; Natural Sciences (including aspects of Technology); Human and Social Science; and General Studies (consisting of ‘Creative Arts’, ‘Physical Education’ and ‘Religious and Moral Education’)” (South Africa. DoE, 2009, p. 43).

The task team emphasised the need for the Foundation Phase to move away from three Learning Programmes and rather have “four subjects” (South Africa. DoE, 2009) from Grade 1, namely “Mathematics, Home Language, First Additional Language (English) and ... ‘General Studies’” (p. 42). “General Studies” would entail the teaching of “Beginning Knowledge”, “‘Arts and Crafts’; ‘Physical Education’; and ‘Health Education’” (South Africa. DoE, 2009, pp. 42-43). The task team (South Africa. DoE, 2009) recommended that Foundation Phase teachers need to focus on the above-mentioned subjects with the following time allocation per week in mind:

|                             |                |
|-----------------------------|----------------|
| - Home Language             | 6 hours        |
| - First Additional Language | 5 hours        |
| - Mathematics               | 5 hours        |
| - General Studies (6 hours) |                |
| ▪ Beginning Knowledge       | 1 hour         |
| ▪ Arts and Crafts           | 2 hours        |
| ▪ Physical Education        | 2 hours        |
| ▪ Health education          | 1 hour (p. 43) |

- The seventh recommendation entailed the request by the task team that the DoE centralise “the quality assurance and catalogue development for textbooks and other LTSM” (South Africa. DoE, 2009, p. 4). The task team also recommended that the Department of Education ensures that a textbook for every subject be given to every Grade 4 to Grade 12 learner (South Africa. DoE, 2009, p. 9). Teachers are encouraged to make use of textbooks which have been evaluated and approved at National level for their planning, sequencing, pacing and teaching of content (South Africa. DoE, 2009, p.54).
- The final recommendation highlighted the importance of “subject specific” training for teachers teaching particular subjects, for subject advisors responsible for such subjects, as well as training to “all support staff, including school management ... district officials ... on the *Curriculum and Assessment Policy*” (South Africa. DoE, 2009, p. 10). It is envisaged that the training to support curriculum implementation will commence from September 2010.

In her communications with all the education stakeholders, including teachers, Ms Motshekga announced that some of above-mentioned recommendations would be implemented in 2010. For example, all primary schools were given the instruction to implement the *Foundations for Learning Programme* in their schools in 2010 (South Africa. DoE, 2010b, p. 2). In the second *Curriculum News* communication teachers were informed that “In 2010 tests for Grade 3 and 9 will be set nationally, administered

by schools, and a representative national sample will be externally moderated” (South Africa. DoE, 2010c, p. 32).

The medium term planning for the phasing in of the *Curriculum and Assessment Policy Statements* of CAPS entails that the Foundation Phase starts with the implementation of CAPS in 2011, whilst “We will phase in other grades in 2012” (South Africa. Department of Basic Education [DoBE], 2010d, p. 2).

The long term planning for CAPS entails the “development of a National Basic Education Action Plan. This long term plan for the basic education sector will be known as *Schooling 2025: The Department of Basic Education's Action Plan*” (South Africa. DoBE, 2010c, p. 3).

### ***3.4.2 Curriculum and Assessment Policy Statement (CAPS) Mathematics – Foundation Phase Final Draft***

During September 2010, the Department of Basic Education made public a draft CAPS (South Africa. DoBE, 2010f) for input from the teaching fraternity. It is anticipated that the *Curriculum and Assessment Policy* will amend the NCS and be implemented from January 2011 (South Africa. DoBE, 2010f, p. 2).

The amended *National Curriculum Statement Grades R - 12: Curriculum and Assessment Policy (January 2011)* replaces the *National Curriculum Statement Grades R - 9 (2002)* and the *National Curriculum Statement Grades 10 - 12 (2004)*. (South Africa. DoBE, 2010f, p. 2)

According to the draft CAPS (South Africa. DoBE, 2010f), the *National Curriculum Statement Grades R-12* consists of “Curriculum and Assessment Policy documents for each approved school subject as listed in the policy document *National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework*

(NQF)” (p. 2). The *National Curriculum Statement Grades R-12* focuses on the teaching of “knowledge, skills and values worth learning”, significantly attuned to “local contexts, while being sensitive to global imperatives” (South Africa. DoBE, 2010f, p. 3). Just like the NCS (South Africa. DoE, 2002b), the amended *National Curriculum Statement Grades R-12* is not only “based on the principles of human rights, inclusivity, environmental and social justice” (South Africa. DoBE, 2010f), and the progressive acquisition of deep knowledge and sophisticated skills, but also on the same seven critical outcomes (p. 3). In the amended curriculum (South Africa. DoBE, 2010f) a high premium is placed on “[a]ctive and critical learning; encouraging an active and critical approach to learning, rather than rote and uncritical learning of given truths” (p.3).

The draft CAPS (South Africa. DoBE, 2010f) prescribes the time that should be spent on teaching subjects in the Foundation Phase as follows:

**Table 3.6 Prescribed time allocation per subject in the Foundation Phase**

| <b>Subject</b>                | <b>Time allocation per week (hours)</b> |
|-------------------------------|---|
| I. Home Language              | <b>6</b>                                |
| II. First Additional Language | <b>4 (5)</b>                            |
| III. Mathematics              | <b>7</b>                                |
| IV. Life Skills               | <b>6</b>                                |
| • Beginning Knowledge         | 1 (2)                                   |
| • Arts and Craft              | 2                                       |
| • Physical Education          | 2                                       |
| • Health Education            | 1                                       |

(p. 4).

The *National Curriculum Statement Grades R-12* strives to ensure that learners will not only have a “deep conceptual understanding” of mathematics but will also be able to demonstrate mathematical knowledge and skills confidently and competently when they are confronted with situations where mathematics plays a role (South Africa. DoBE,

2010f, p. 6). The draft CAPS (South Africa. DoBE, 2010f) describes the content topics and methodology for the Foundation Phase, highlighting how they should be implemented in the Grade R daily programme (see paragraph 3.4.3 in this regard).

The draft CAPS for the Foundation Phase (South Africa. DoBE, 2010f) advises teachers to take into consideration the abilities of their learners when choosing teaching strategies and methodologies (p. 7). Teachers are also advised that “[a]ll concepts should be thoroughly taught before moving on to the next” with activities “designed to consolidate knowledge on a concrete, semi-concrete and abstract level” (South Africa. DoBE, 2010f, p. 7). There are five content areas which need to be taught in the Foundation Phase, namely “Numbers, Operations and Relationships, Patterns, Functions and Algebra, Space and Shape (Geometry), Measurement and Data Handling” (South Africa. DoBE, 2010f, p. 8). Most of the teaching and learning time (55% of the Numeracy time of 7 hours per week) should be spent on Numbers, Operations and Relationships, whilst 15% of the time should be spent on Space and Shape. A further 15% of the Numeracy teaching time is awarded to Measurement, whilst Data Handling and Patterns, and Functions and Algebra, are given a weighting of 7,5% each (South Africa. DoBE, 2010f, p. 8).

The specific content focus of the Foundation Phase regarding Numbers, Operations and Relationships involves the provision for learners of activities enabling them to count in various ways whilst manipulating physical objects. The teacher needs to provide opportunities for learners to “solve contextual (word) problems and build up and break down numbers” (South Africa. DoBE, 2010f, p. 8). In Patterns, Functions and Algebra, the specific focus is on establishing a foundation for algebra in the later phases, so a young learner is expected to be able to describe, draw, copy, extend, and create geometric and numeric patterns (South Africa. DoBE, 2010f, p. 8). The specific content focus of Space and Shape has to do with learners knowing, and being able to describe and demonstrate their knowledge, about space and shapes in their surroundings, as well as the positions of such shapes. Teachers are encouraged to provide activities in which learners handle and manipulate shapes and mathematical objects physically (South

Africa. DoBE, 2010f, p. 8). The importance of handling objects to measure concretely is also evident in the specific focus content of measurement.

In this phase the learner's concept of measurement is developed by working practically with different concrete objects and shapes. These investigations should happen through making direct comparisons and using non-standardised measuring units (e.g. body parts, containers, pacing on foot). The learner should develop appropriate vocabulary to describe these comparisons (e.g. 'shorter than', 'longer than'). Activities relating to time should be structured with the awareness that the learner's understanding of the passing of time should take place before he or she reads time. (South Africa. DoBE, 2010f, p. 8)

In data handling, the content-specific focus does not only involve "sorting objects and data in different ways, based on the different features of the objects or data," but also making sure that the data is represented and recorded according to "a one-to-one correspondence between items in the data set and their representation" (South Africa. DoBE, 2010f, p. 8).

The draft *CAPS for the Foundation Phase* (South Africa. DoBE, 2010f) includes a breakdown of each of the content areas into smaller and specified actions. See Table 3.7 in this regard:

**Table 3.7 An example of the breakdown of the content area for Numbers, Operations and Relationships**

| 1. NUMBERS, OPERATIONS AND RELATIONSHIPS |   |   |  |   |
|--|---|---|--|---|
| CONTENT                                  | GRADE R   | GRADE 1   | GRADE 2  | GRADE 3   |
| "1.1. Whole numbers                      | R.1.1.1. Counts to at least 10 everyday objects reliably.   | 1.1.1.1. Knows, reads and writes number symbols from 1 to at least 100 and number names from 1 to at least 20   | 2.1.1.1. Counts to at least 100 everyday objects reliably.   | 3.1.1.1.  |
|  | R.1.1.2. Counts forwards and backwards in 1s from 1 to 10   | 1.1.1.2. Orders, describes and compares whole numbers from 1 to 20.   | 2.1.1.2. Count forwards and backwards in 1s, 2s, 3s, 4s, 5s and 10s between 0 and 200.   | 3.1.1.2. Count forwards and backwards in 2s, 5s and 10s between 0 and 500.  |
|  | R.1.1.3.  | 1.1.1.3. Represent odd and even numbers from 1 and 10.  | 2.1.1.3.   | 3.1.1.3. Count forwards and backwards in 20s, 25s, 50s and 100s between 0 and 1 000.  |
|  | R.1.1.4. Knows number names and symbols between 0 and 10.   | 1.1.1.4. Recognise the place value of numbers between 11 and 19.  | 2.1.1.4. Recognise number symbols and names between 0 and 200.   | 3.1.1.4. Recognise and identify number names and symbols between 0 and 1 000.   |
|  | R.1.1.5. Orders and compares collections of objects using the words 'more', 'less' and 'equal'.                                 | 1.1.1.5.  | 2.1.1.5. Order, describe and compare 2-digits whole numbers.   | 3.1.1.5. Order, describe and compare 2-digit and 3-digit whole numbers.   |
|  | R.1.1.6.  | 1.1.1.6. Add and subtract whole numbers with answers up to 20.  | 2.1.1.6. Represent odd and even numbers  | 3.1.1.6. Represent odd and even numbers   |
|  | R.1.1.7.  | 1.1.1.7. Repeated addition with whole numbers and with answers to at least 20.  | 2.1.1.7. Recognise the place value to at least 2-digits.   | 3.1.1.7. Recognise the place value of 3-digits.   |
|  | R.1.1.8.  | 1.1.1.8. Mental calculations with whole numbers including: Addition and Subtraction to at least 20  | 2.1.1.8.   | 3.1.1.8. Round off to the nearest 10  |
|  | R.1.1.9. Solves verbally-stated addition and subtraction problems with single-digit numbers and with answers up to at least 10. | 1.1.1.9. Problem-solving involving whole numbers.   | 2.1.1.9. Add and subtract whole numbers with answers up to 100.  | 3.1.1.9. Add and subtract whole numbers with at least 3 digits.   |
|  | R.1.1.10.   | 1.1.1.10. Uses the following techniques:<br>a) building up and breaking down numbers;<br>b) doubling and halving;<br>c) using concrete apparatus e.g. counters;<br>d) number lines. | 2.1.1.10. Multiplication of at least 2-digit by 1-digit numbers  | 3.1.1.10. Multiplication of at least 2-digit by 1-digit numbers   |
|  | R.1.1.11.   | 1.1.1.11. Explains own solutions to problems.   | 2.1.1.11. Division of at least whole 1-digit by 1-digit numbers.   | 3.1.1.11. Division of at least whole 2-digit by 1-digit numbers.  |
|  | R.1.1.12.   | 1.1.1.12. Checks the solutions given to problems by peers.  | 2.1.1.12. Mental calculations with whole numbers including: Addition, subtraction and multiplication to at least 20  | 3.1.1.12. Mental calculations with whole numbers including: Addition, subtraction, multiplication and division to at least 50   |
|  | R.1.1.13.   |   | 2.1.1.13. Problem-solving involving whole Numbers  | 3.1.1.13. Problem-solving involving whole numbers   |
|  | R.1.1.14. Explains own solutions to problems.   |   | 2.1.1.14. Uses the following techniques:<br>a) building up and breaking down numbers;<br>b) doubling and halving;<br>c) using concrete apparatus e.g. counters;<br>d) number lines | 3.1.1.14. Building up and breaking down numbers<br>a) building up and breaking down numbers;<br>b) doubling and halving;<br>c) number lines<br>d) rounding off in tens. |
|  |   | 2.1.1.15. Explains own solutions to problems.   | 3.1.1.15. Explains own solutions to problems.  |   |
|  |   | 2.1.1.16. Checks solutions  | 3.1.1.16. checks solutions to problems given by peers".  |   |

(South Africa. DoBE, 2010f, pp. 10-11).

In addition to this break-down of the five content areas, the draft *CAPS for the Foundation Phase* (South Africa. DoBE, 2010f) specifies the activities, resources and duration for each of the five content areas. See Table 3.8 for an example in this regard.

**Table 3.8 An example of the breakdown of the content area for Numbers, Operations and Relationships**

| <b>Term 1</b>                        |  |   |  |                             |                                     |
|--------------------------------------|--|---|--|-----------------------------|-------------------------------------|
| <b>“Content Area</b>                 | <b>Content</b>   | <b>Clarification/Notes/Activities/Examples</b>  | <b>Recommended resources</b>   | <b>Approximate duration</b> | <b>Suggested Formal Assessment”</b> |
| <b>ORIENTATION</b>                   | <b>Orientation</b>   | <ul style="list-style-type: none"> <li>• Complete register daily</li> <li>• Place the name of the day, month and weather conditions on weather chart daily. Children recite the days of the week daily</li> <li>• Place the names of the learners on the birthday chart to indicate the month in which they celebrate their birthdays.</li> <li>• Write the names of learners on cards and stick the cards on their tables.</li> </ul>  | Weather chart<br>Birthday chart<br>Cardboard strips  | <b>Week 1</b>               |                                     |
| <b>NUMBERS AND NUMBER OPERATIONS</b> | <b>Whole number counting<br/>One-to-one correspondence</b> | <p><b>Estimate and count a number of objects up to 5</b><br/>Teacher places 1 to 5 objects on the table. Learners look at the objects. Teacher covers the objects. Learners say how many objects they saw. Teacher uncovers the objects. Learners count them. Teacher asks: Are there as many or more than you counted?</p> <ul style="list-style-type: none"> <li>• <b>Develop one-to-one correspondence up to 5</b> <ol style="list-style-type: none"> <li>a) Learners count as they push beads across the abacus.</li> <li>b) Learners place counters on table while counting.</li> </ol> </li> <li>• <b>Count forwards up to 10</b> <ol style="list-style-type: none"> <li>a) Learners clap their hands or stamp their feet while they count.</li> <li>b) Teacher points to numbers on the number line while learners count.</li> </ol> </li> </ul> | Toys, bottle tops, cubes, objects, crayons<br>Abacus<br>Seeds, paper clips, match sticks<br>Number line 1-10 | <b>Week 2</b>               |                                     |

(South Africa. DoBE, 2010f, p. 11)

Finally, the draft *CAPS for the Foundation Phase* (South Africa. DoBE, 2010f) gives guidelines regarding assessment, according to which twelve assessment tasks (three per term) should consist of oral assessments, practical assessments and written assessments (p. 122).

**3.4.3 Curriculum and Assessment Policy Statement (CAPS) Mathematics – Foundation Phase (Grade R) Final Draft**

The Curriculum and Assessment Policy Statement (CAPS) Mathematics – Foundation Phase (Grade R) (South Africa. DoBE, 2010e) starts by presenting a table reflecting a term’s planning. See Table 3.9 in this regard.

**Table 3.9 An example of the breakdown of the content area for Numbers, Operations and Relationships for Grade R**

| Mathematics - Grade R TERM 1                             |   |   |   |  |                              |
|--|---|---|---|--|------------------------------|
| “WEEK 1 ORIENTATION<br><br>(Approximately 3 school days) |   | Suggested contact time:<br>7 hours per week<br><br>One teacher-directed planned class activity (ring) of ± 30 minutes per day (± 5 Mathematics activities per week)   |   |  |                              |
| Content Area   | Content                                     | Clarification/Notes/Activities/Examples   | Recommended resources                         | Approximate duration   | Suggested Formal Assessment” |
| Numbers & Number Operations                              | Toilet routine (Ordinal numbers)            | <b>Introduce toilet routine</b><br>Develop an awareness of sequence/order of toilet routine<br>e.g. first use toilet and then wash hands etc.<br>Develop an awareness of ordinal  | Soap, facecloths<br>Toilets<br>Running water  | After the toilet routine has been introduced, this activity takes place every day. |                              |
|  | Tidy-up routine (Sorting)                   | <b>• Introduce Tidy-up Chart</b><br>Establish smaller working groups.<br>Promote ordering and sorting of LTSM.<br>Divide number of learners in your class into the eight tidy up areas.<br>Select your own areas to be tidied up.   | Tidy-up Chart                                 | After the Tidy-up chart has been introduced, this activity takes place every day.  |                              |
| Measurement  | Daily Programme (Sequencing of events-Time) | <b>Introduce the Daily programme</b><br>Develop the sequencing of events within one day.<br>Pictures are displayed from left to right.<br>The leader of the day moves a movable arrow as the activities on the daily programme progress.<br>Learners experience the sequencing of events during a day | Daily programme represented in picture format | Every day  |                              |

(South Africa. DoBE, 2010e, pp. 2-3)

A suggested format for assessment is also enclosed. See Table 3.10 for an example of assessment in the Grade R classroom.

Table 3.10 An example of Assessment to take place during Week 30

| “Content Area               | Content   | Suggested Formal Assessment  |
|-----------------------------|---|--|
| Numbers & Number Operations | The meaning of the numbers 1, 2, 3, 4, 5, 6 and 7 | <ul style="list-style-type: none"> <li>• Recognise the number symbols and number names 1 to 7 on a concrete and semi-concrete level.</li> <li>• Link the same number of objects to the number of pictures and dots.</li> <li>• Recognise and identify the number symbol and the number name that involve numbers 1 to 7</li> </ul> |
|                             | Use numbers in context                            | <ul style="list-style-type: none"> <li>• Identify house number and own telephone number.</li> <li>• Gain knowledge of bank notes</li> </ul>  |
|                             | “More than, less than and equal to”               | <ul style="list-style-type: none"> <li>• Understands to order and compare collections of objects using “more than/less than” and “equal to” that involve numbers 1 to 10.</li> </ul>   |
|                             | Addition and subtraction                          | <ul style="list-style-type: none"> <li>• Orally solve addition and subtraction problems using story sums and counters with answers up to 7.</li> </ul>   |
| Measurement                 | Capacity  | <ul style="list-style-type: none"> <li>• Compare “empty/full; more than/ less than; long/short; light/heavy; lighter/heavier”.</li> </ul>  |
|                             | Mass  | <ul style="list-style-type: none"> <li>• Compare the mass of different objects</li> </ul>  |
|                             | Length  | <ul style="list-style-type: none"> <li>• Estimate the length of different objects</li> <li>• Distinguish between longer and longest”</li> </ul>  |

(South Africa. DoBE, 2010e, p. 50).

Information regarding the organisation and teaching methodology for Grade R is included in the draft *CAPS for the Foundation Phase* (South Africa. DoBE, 2010f). This emphasises that “[t]eaching in a Grade R set-up is **INFORMAL** but with a structured daily programme to create a set-up of ‘play with a purpose’” (p. 6). The draft *CAPS for the Foundation Phase* stresses that the Grade R classroom is structured and organised differently from the Grade One classroom in that “[l]earning is based on a principle of integration and play-based learning” (South Africa. DoBE, 2010f, p. 6).

The draft *CAPS for the Foundation Phase* (South Africa. DoBE, 2010f) recommends that worksheets are only to be given to learners after they have experienced a concept kinaesthetically, concretely and semi-concretely (pp. 6-7). Although numeracy is integrated with the daily programme, a time slot of 30 minutes per day is set aside for teacher-directed and planned numeracy activities. The draft *CAPS for the Foundation Phase* (South Africa. DoBE, 2010f) recommends the following daily programme for Grade R:

Table 3.11 An example of a suggested Grade R daily programme/time-table

|   |   |                           |
|---|---|---------------------------|
| M | "ARRIVAL AND FREE PLAY INSIDE<br>(30min)  | 7:30 -8:00<br>(30min)     |
| T | REGISTER, WEATHER CHART,  | 8:00 -8:15                |
| W | TEACHER-DIRECTED PLANNED CLASS<br>ACTIVITY (Mathematics/General<br>Studies/Languages) | 8:15 -8:45<br>(30 min)    |
| T | ART ACTIVITY every day  | 8:45 -9:30<br>(45 min)    |
| F | TIDY UP   | 09:30 -9:45<br>(15 min)   |
|   | TEACHER-DIRECTED PLANNED CLASS<br>ACTIVITY (Mathematics/General<br>Studies/Languages) | 9:45 - 10:15<br>(30 min)  |
|   | TOILET ROUTINE  | 10:15 -10:25<br>(10 min)  |
|   | REFRESHMENTS  | 10:25 -10:45<br>(20 min)  |
|   | FREE PLAY OUTSIDE   | 10:45 -11:30<br>(45 min)  |
|   | TIDY UP   | 11:30 -11:40<br>(10 min)  |
|   | TOILET ROUTINE  | 11:40 -11:50<br>(10 min)  |
|   | TEACHER-DIRECTED PLANNED CLASS<br>ACTIVITY (Mathematics/General<br>Studies/Languages) | 11:50 -12:15<br>(30 min)  |
|   | STORY EVERY DAY   | 12:15 -12:45<br>(30 min)  |
|   | REST AND DEPARTURE  | 12:45 -13:00<br>(15 min)" |

### 3.5 CONCLUSION

In this chapter, the two curricula implemented since 1997, namely the *Statement of the National Curriculum for Grades R-9* (Curriculum 2005) and *The Revised National Curriculum Statement Grades R-9 (Schools)* or NCS, were discussed, together with the provisional third, "amended" curriculum that is to be implemented by teachers of Grades R – 3 in 2011.

Reading all the principles and prescriptions of each of these curricula is likely to leave one feeling overwhelmed and exhausted, and with no clear understanding of how the curriculum, especially the NCS for Grade R, should be implemented. Reading Chapters 2 and 3 of this study gives one an initial sense of the paradigm shifts that Foundation Phase teachers have had to make every four years as a result of the introduction of a revised curriculum.

Taking into account the historical and political background of teaching numeracy in South Africa, as documented in Chapter 2, as well as the above-mentioned curriculum

policy development and implementation, I believe it is necessary to have a clear understanding of what is meant by learning and how numeracy learning should take place in the Grade R classroom. Therefore, in the next chapter, I shall discuss four learning theories and their relation to curriculum implementation in the Grade R classroom.

## 4.1 INTRODUCTION

An understanding of learning theories is important to ground developmentally appropriate numeracy activities in Grade R. This became apparent when the transcriptions of the individual interviews with the data analysis of the transcriptions of the videotapes of classroom activities were analysed (see paragraph 6.3.4). Thus it makes it pivotal to include a chapter on learning theories.

In the previous two chapters, I discussed the political and historical context of numeracy in ECD sites as well as developments in curriculum policy since 1998. These contextual factors affect the experience of Grade R teachers in important ways. Both Curriculum 2005 and the NCS (South Africa. DoE, (2002b) are based on an outcomes-based educational model, within which learner-centeredness is of cardinal significance. To further contextualise Grade R learning it is necessary to consider how a young learner learns and develops his or her numeracy potential. Troutman & Lichtenberg (2003) ask

How do children learn new ideas and ways of doing things? How do they learn to talk? How do they learn to play games, sing songs, write their names? How do they learn to count, to tell how many? Are some ways better than others to help children learn? (p. 9)

The *Evaluation of the Accredited Training of Early Childhood Development Practitioners Baseline Study: Quality of Teaching and Learning in Grade R* (South Africa. ECDoE, 2008a) declares that “Children are born to learn” (p. 23). It is therefore important to understand how a child learns and what the key philosophies and theories assert in this regard. In this chapter, I shall discuss how learning takes place for a young learner according to four learning theories, and what relationships exist between these

four learning theories and the NCS. I will then analyse how a Grade R classroom should function when numeracy is taught, according to these four learning theories. The four learning theories that appear to inform the NCS are the Neuroscience of learning, Behaviourism, Constructivism and Multiple Intelligences. See Figure 4.1 for an overview:

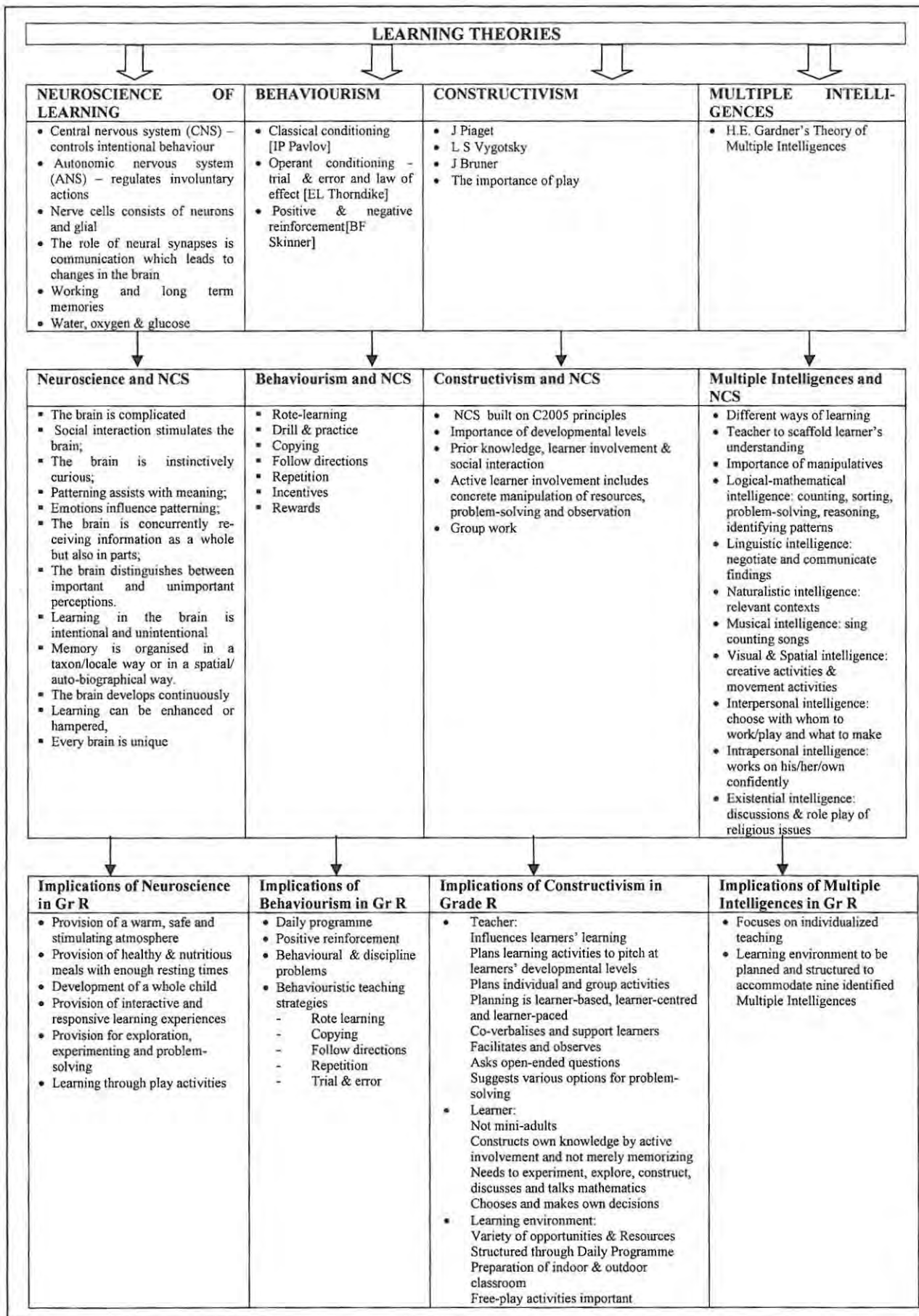


Figure 4.1 Learning theories and their relationships to NCS and implications for Grade R.

## 4.2 Learning theories regarding how a young child learns

Numerous attempts have been made to define learning. Schunk (2008) views learning as an umbrella term for gaining and adapting “knowledge, skills, strategies, beliefs, attitudes, and behaviours. People learn cognitive, linguistic, motor, and social skills, and these can take many forms” (p. 1). Hergenhahn and Olson (2005) are of the opinion that learning leads to a change in “observable behaviour” that is “*relatively permanent*” (pp. 3-4). The *Baseline Study* (South Africa. ECDoE, 2008a) appears to share the view of Hergenhahn and Ohlson (2005) in seeing change as an eminent part of learning, especially if it is a “result of practice or experience” (p. 46). For the purpose of this thesis, the four learning theories under consideration are:

- Neuroscience of Learning,
- Behaviourism,
- Constructivism and
- Multiple Intelligences.

### 4.2.1 Neuroscience of Learning

Troutman & Lichtenberg (2003) defines neuroscience as “the study of the human brain and nervous system” (p. 19). Shunk (2008) explains that the neuroscience of learning means “the science of the relation of the nervous system to learning and behaviour” (p. 366).

The nervous system consists of a central and an autonomic nervous system. The “central nervous system consists of the brain and spinal cord” (Shunk, 2008) with the spinal cord carrying “signals to and from the brain” (p. 377). The central nervous system acts as “the body’s central mechanism for control of voluntary behaviour (e.g. thinking and acting)” (Shunk, 2008, pp. 366-377). The autonomic nervous system, on

the other hand, controls and regulates automatic actions by the organs and the body's muscles (Shunk, 2008, p. 517).

Pritchard (2005) observes that the central nervous system is made up of “over 100 billion active nerve cells, each of which is capable of producing 20,000 to 50,000 branches” (p. 77). These nerve cells can be divided into neurons and glia. Pritchard (2005) states that there are approximately nine hundred billion glia whose functions are to “support and protect the nerve cells” (p. 77). In contrast to the glia, approximately one hundred billion neurons are responsible for sending and receiving “information across muscles and organ” (Shunk, 2008, p. 368). Communication between the neurons is possibly “by means of electrical signals and chemical reactions” (Shunk, 2008, p. 369). In order for communication to take place between neurons, they need to build approximately one thousand trillion pathways (Troutman & Lichtenberg, 2003, p. 20). These connections or pathways are called synapses.

Each neuron is composed of a cell body, thousands of short dendrites and one axon. A *dendrite* is an elongated tissue that receives information from the other cells. An *axon* is a long thread of tissue that sends messages to other cells. *Myelin sheath* surrounds the axon and facilitates the travel of signals. (Shunk, 2008, pp. 369-370)

The communication process of the nerve cells or neurons is complicated:

At the end of each axon are chemical *neurotransmitters*. They do not quite touch dendrites of another cell. The gap is called the *synaptic gap*. When electrical and chemical signals reach a high enough level, neurotransmitters are released into the gap. The neurotransmitters will either activate or inhibit a reaction in the connected dendrite. Thus, the process begins as an electrical reaction in the neuron and axon, changes to a chemical reaction in the gap, and then reconverts to an electrical

response in the dendrite. This process continues from neuron to neuron at a lightning speed. (Shunk, 2008, p. 370)

The patterns of connections are made when

stimuli or incoming information that involves complex cognitive processing activates the appropriate brain portion and encodes the events as synaptic connections. With repetition, these connections increase in numbers and become strengthened, which means they occur more automatically and communicate better with one another. (Shunk, 2008, p. 383)

It is important to take cognisance of the role that the neurotransmitters in the synaptic gap play, as it “is critical for learning. At the neural level, learning essentially is a change in the receptivity of cells brought about by neural connections formed, strengthened, and connected with others through use” (Shunk, 2008, p. 370). Troutman and Lichtenberg (2003) agree with Shunk (2008) that the brain undergoes change throughout a person’s life: a person needs to use his/her brain often in order to create and build connection patterns. The more the brain is used, the more patterns and connections will be made, which will lead to changes in the brain (Shunk, 2008, p. 20).

In sum, for learning to take place, Shonkoff & Meisels (2000) confirm that the

*functional* development of the brain is made possible by, in lay terms, the completion of the wiring diagram: the local and distal connections that are formed between and among areas by way of synapses and entire neural circuits. (p. 215)

Once sensory inputs are received by sensory registers, they “are processed in the sensory memory portions of the brain” (Shunk, 2008, p. 403), and will be discarded or retained. Sensory inputs that are retained are then transferred to the working memory as “a neural ‘perception’ of that input” (Shunk, 2008, p. 379). Shunk (2008) points out that “[t]his perception also is responsible for matching information to what is already stored in memory, a process known as *pattern recognition*” (p. 379).

To avoid the discarding of neural perceptions from the working memory, multiple repetitions of perceptions need to take place before they are sent to the long term memory. According to Shunk (2008), information will only be stored in the long term memory if a neural perception has been received, together with an emphasis that the said “information is important and needs to be used” (p. 381). Shunk (2008) categorises the information that needs to be stored” in the “Long-Term Memory” or “LTM” (p. 151) as “declarative memory (facts, definitions, and events) and procedural memory (procedures and strategies)” (p. 381). “Different parts of the brain are involved in LTM depending on the type of information (e.g. declarative and procedural)” (Shunk, 2008, p. 381). Multiple presentations of neural perceptions strengthen the neural pathways, which leads to fast neural reactions. According to Shunk (2008), the crux of cognitive neuroscience learning is the formation and “strengthening of neural connections and networks (synaptic connections)” (p. 382).

The brain consists primarily of water, as well as fat and protein (Pritchard, 2005, p. 88). It is therefore important to provide the brain with oxygen, water and nutrition or glucose to function effectively, physiologically speaking. “If any of these are deficient in any measure, then brain function is reduced and eventually impaired” (Pritchard, 2005, p. 88).

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Pritchard (2005) lists twelve key qualities or principles, as per the work of the researchers Caine and Caine, to describe the brain and its role in learning (p. 79). In determining whether the NCS policy documents are sensitive towards the neuroscientific theory of learning, I used these twelve key qualities as a guideline:

- The brain is a complicated organ;
- The brain is stimulated by social interaction;
- The brain is instinctively curious;
- Patterning assists with meaning in the brain;
- Emotions influence patterning;
- The brain is concurrently receiving and perceiving information as a whole but also in parts;
- The brain distinguishes between important and unimportant perceptions;
- Learning in the brain involves intentional and unintentional processes;
- Memory can be organised in a taxon/locale way or in a spatial/autobiographical way;
- The brain and learning are continuously being developed;
- Learning can be enhanced or hampered, depending on the learning conditions;
- Every human being is unique and prefers learning styles suited to their unique brains.

The *RNCS Teacher's Guide* (South Africa. DoE, 2003b) acknowledges that the brain and its workings are complicated, because young learners' cognitive, physical and emotional development differs (p. 19). "The different developmental processes are not synchronized" (South Africa. DoE, 2003b, p. 19). Teachers are advised to consider the developmental patterns of learners when they plan a lesson.

The second principle implies that the “brain is a social brain”, meaning that working with a peer or mentor stimulates one’s own learning (Pritchard, 2005, p. 79). In order for conceptual meaning or an understanding of mathematical concepts to take place, learners need to talk about it with their peers and teacher (South Africa. DoE, 2003c, p. 64).

The *RNCS Teacher’s Guide* (South Africa. DoE, 2003b) endorses the third principle, namely, that a human being is born with an inquisitive nature: “In general, Foundation Phase learners come to school with an eagerness to learn” (p. 19). The *Guide* encourages teachers to make use of the inquisitive, flexible and intelligent nature of young learners when they solve a mathematical problem (South Africa. DoE, 2003b, p. 65).

The fourth principle is that “the search for meaning occurs through patterning” (Pritchard, 2005, p. 79). The *RNCS Teacher’s Guide* (South Africa. DoE, 2003b) stresses that Foundation Phase learners, arriving at the school for the first time, have previous information and experience (p. 19). According to Pritchard (2005), new knowledge and experiences are linked to prior knowledge (p. 79). Therefore understanding will only take place when patterns are established through the recall of prior knowledge (Pritchard, 2005, p. 79).

The fifth principle is that the search for understanding and meaning is influenced by emotions, and explains that when a learner is emotionally upset, he or she will probably not be able to learn successfully (Pritchard, 2005, p. 79). The *RNCS Teacher’s Guide* (South Africa. DoE, 2003b) emphasises that learners need to be provided with a safe and conducive environment if learning is to take place (p. 19).

The sixth principle stresses that the brain is concurrently receiving and perceiving information as a whole and in parts. This quality indicates that although there are brain structures that might deal with specific perceptions, the brain also functions simultaneously as a whole. The *RNCS Teacher’s Guide* (South Africa. DoE, 2003b) underwrites the principle that a young learner develops holistically (p. 58).

The *RNCS Teacher's Guide* (South Africa. DoE, 2003b) emphasises the importance of engaging learners in problem-solving, thinking and reasoning as well as physically handling and measuring numeracy objects, in order to prevent them from becoming bored and passive, and losing concentration during numeracy presentations (p. 19). The reason why learners get distracted is due to the ability of the brain to focus on important as well as unimportant perceptions:

We are capable of both paying attention to the main points of reference in a teaching situation and at the same time being aware of many of the peripheral or background events which may be present. This has implications for the classroom environment, since sometimes the peripheral events can take over from the main event, in terms of holding a learner's attention. (Pritchard, 2005, p. 83)

According to Pritchard (2005), the eighth principle describes learning as comprising "conscious and unconscious processes" (p. 83). In order for focussed learning to take place one needs to be attentive to the learning material to be absorbed. The RNCS (South Africa. Department of Education [DoE], 2002a) encourages conscious and focussed mathematical mental activities through the five mathematical learning outcomes and the respective assessment standards. However, incidental learning can also take place: for instance, the incidental reading of numeracy posters can play an important role in a print-rich Foundation Phase classroom.

The ninth principle maintains that "we have at least two ways of organising memory" (Pritchard, 2005, p. 84). One way that memory can be organised is "taxon/locale" (Pritchard, 2005, p. 84). According to Pritchard (2005) taxon or locale memory relies on the receiving of either praise or scolding and reprimand (p. 84). Taxon or locale memory does not guarantee that direct links are made and "often unrelated information can be accessed in what might appear to be a random fashion" (Pritchard, 2005, p. 84).

The other way of organising memory is called “Spatial/autobiographical memory” (Pritchard, 2005, p. 84). Spatial or autobiographical memory is based on “the links and associations between events, particularly when personal experience is involved. In this type of learning, recall can be instant and is more reliant on the logic of links formed at the time of the event in question” (Pritchard, 2005, p. 84). There is no clear indication in the NCS policy document (South Africa. DoE, 2002a) regarding activities to stimulate memory, except in the case of Mathematics learning outcome 3, where teachers are advised to select contexts “in which the learner can study space and shape in a way that can be used to build awareness of other Learning Areas, as well as human rights, and social, economic, cultural, political and environmental issues” (p. 10).

The tenth principle or quality states that “Learning is developmental” (Pritchard, 2005, p. 84). The importance of synaptic networks in learning and brain development are emphasised by researchers such as Shunk, (2008), Troutman & Lichtenberg (2005), and Shonkoff & Meisels, (2000). The more synaptic networks are made, the more patterns of connection are established and strengthened, which in turn, influences the brain and learning to develop. The *RNCS Teacher’s Guide* (South Africa. DoE, 2003b) agrees with Pritchard (2005) that learning occurs developmentally and according to learners’ own individual “growth pattern” (p. 19).

The second last principle highlights the fact that learning can either be improved and stimulated by a challenge, or hampered and even prevented by unfavourable learning conditions perceived as threats. As stated earlier in relation to the fifth criterion, emotions like fear and stress can influence the brain’s ability to function effectively. The *RNCS Teacher’s Guide* (South Africa. DoE, 2003b) is explicit in its advice to teachers to ensure that their classrooms are conducive to learning. Learners “have the need to feel safe and are easily intimidated by an unpleasant atmosphere, which will prevent them from learning effectively” (p. 19). The *Guide* (South Africa. DoE, 2003b) also advises teachers that discipline problems might occur if a learning activity is either too simple or too complicated. In the case of executing a non-challenging task, learners feel bored, whilst a task that is

above their current mathematical capabilities, may lead to fear, stress and frustration (p. 19).

The twelfth principle emphasises that every human being is unique and will demonstrate their own inclination for learning (Pritchard, 2005, p. 85). The *RNCS Teacher's Guide Focussing on Mathematics* (South Africa. DoE, 2003c) states clearly that "Different learners learn in different ways and teachers need to be aware of this as they plan teaching activities" (p. 24).

In summary, it can be concluded that the current curriculum for Grades R-3, namely the NCS, does acknowledge the role that neuroscience plays in learning by young learners. Therefore, teachers should take cognisance of the implications of neuroscience's understanding of learning when they plan their learning activities.

- ***Implications of Neuroscience learning in a Grade R classroom when numeracy is taught***

One of the major responsibilities of the Grade R teacher is to ensure that she provides a warm, safe and stimulating atmosphere in her classroom where young learners can feel happy and accepted. Learning is severely affected if a learner is unhappy, frightened and stressed. Van der Merwe (1988a) stresses the importance of having nutritious meals and resting times in a daily programme by stating that "We know that a hungry and tired child cannot learn and pay attention, a sick child cannot grow or develop properly" (p. 15). Teachers need to advise parents or guardians to provide their children with healthy and nutritious food, if meals are not provided at the school. The teacher must alternate busy and active activities such as movement activities with calmer activities such as "reading" books in the book corner or resting on the carpet.

Van der Merwe (1998a) emphasises that the Grade R teacher must be mindful of the fact that the learner needs to be developed holistically (p. 2). Van der Merwe (1988a) points out that a learner's developmental areas – motor and bodily, cognitive, emotional and religious – intersect and affect each other (p. 2).

Morrison (1991) adds that “these areas are not separate and mutually exclusive – they are interrelated, and good programs try to balance activities to address these areas” (p. 232). When planning activities for learners to promote their physical, social, cognitive and emotional development, the teacher needs to remember that all learners do not develop at the same pace. For example, a learner might be advanced in his or her cognitive development whilst his/her emotional development is comparatively backward. It is important that the teacher plans activities which will promote the development of all the above-mentioned areas.

In order to stimulate the brain socially, young learners need to be socially engaged with peers as well as with adults. Morrison (1991) points out that a learner’s language development is rapid during the years before formal school commences (p. 221). According to Van der Merwe (1998a), the aim of fostering the social and emotional development of young learners is (among others) to “help children develop basic trust in people and learn how to get along with others” (p. 16). By giving learners in her class opportunities to share toys and equipment and play together, the teacher encourages learners to be independent, confident and creative (Van der Merwe, 1988a, p. 16). Teachers are advised that

children learn best through their active involvement with people, places, things, ideas and events. The role of the teacher is to provide interactive and responsive learning experiences for children throughout the day. (South Africa. DoE, 2008a, p. 31)

It is of the utmost importance that the inquisitive nature of the brain and the eagerness of young learners to learn should be accommodated in a stimulating environment. In order to provide stimulating numeracy activities which will provide opportunities for exploration, experimenting and problem-solving, Grade R teachers should be aware of their learners’ needs and interests (Morrison, 1991, p. 229). Teachers are to ensure that learning “take[s] place through active participation in planning, constructing, creating, discovering, exploring,

experimenting, problem solving and playing” (South Africa. ECDoE, 2008b, p. 6). The importance of play must not be underestimated in the Grade R classroom as a means of developing the whole child. Grade R teachers should be aware that “Children engage in many types of play based on the development of their thinking, reasoning, language and social skills” (South Africa. DoE, 2008a, p.3).

Although these play types differ from each other, they all promote language and communication, social and physical, thinking and reasoning skills. When grouped together in this way, we see that children are learning in many different ways while they play. (South Africa. DoE, 2008a, p.3)

In conclusion, the Grade R teacher needs to take cognisance of the important role that the formation of synaptic networks play in learning. She should plan her numeracy learning activities in such a way that will ensure that synaptic networks are built and strengthened.

#### **4.2.2 Behaviourism**

Pritchard (2005) defines behaviourism as “a theory of learning focusing on observable behaviours and discounting any mental activity. Learning is defined simply as the acquisition of new behaviour” (p. 7). According to Troutman & Lichtenberg (2003) behaviourism depends on a change of behaviour “through a stimulus-response process. The learner is given instructions for completing a task; when the task is completed correctly, the learner receives a reward or confirmation for appropriate behaviour” (p. 13). The learner is rewarded for his correct actions and the more he executes these correct actions, the more he is rewarded.

Behaviourism consists of classical conditioning and operant conditioning. A Russian psychologist, Ivan Petrovich Pavlov (1849-1936), conditioned dogs to listen to the

sounds of a bell whilst they were eating and eventually the dogs would salivate by just hearing the bells, even if no food was produced. Pavlov indicated that classical conditioning follows four stages after “the initial connection between stimulus and response: acquisition, extinction, generalisation and discrimination” (Pritchard, 2005 p. 8). Acquisition refers to the first stage when the stimulus-response behaviour has been learnt. The second stage entails extinction, whereby the learnt stimulus-response behaviour disappears unless it is regularly repeated until it becomes a general mode of behaviour. In the third stage, “[a]fter a conditioned response to one stimulus has been learnt, [the subject] may also respond to similar stimuli without further training. If a child is bitten by a dog, the child may fear not only that particular dog, but all dogs” (Pritchard, 2005, p. 8). In contrast, the fourth stage of discrimination ensures that the subject will only respond to the learnt conditioned stimulus and not to similar stimuli (Pritchard, 2005, p. 9).

Edward Lee Thorndike (1874–1949) was of the opinion that learning sometimes “occurs by *trial and error*” (Shunk, 2008, p. 29). He studied animals who selected one of many responses in order to reach a specific outcome. The selected response led the animal to experience the consequences of its selection. “The more often they make a response to a stimulus, the more firmly that response becomes connected to that stimulus” (Shunk, 2008, p. 29).

Trial and error learning occurs gradually (incrementally) as successful responses are established and unsuccessful ones are abandoned.

Connections are formed mechanically through repetition; conscious awareness is not necessary. (Shunk, 2008, p. 29–30)

Thorndike followed up his trial and error experiments with an experiment to test the “law of effect” (Troutman & Lichtenberg, 2003, p. 13). He rewarded cats when they left their cages by pulling a lever which acted as a stimulus. The result was that the cats adapted their behaviour by leaving whenever they felt like it (Troutman & Lichtenberg, 2003, p. 13). Thorndike’s Law of Effect says that if a response or

reaction is satisfying or rewarding, such a response will lead to a learning outcome, whilst responses which were experienced as negative and regarded as punishment, were disregarded. Based on his Law of Effect, Thorndike concluded that “satisfying stimulus response connections are strengthened and annoying ones are weakened” (Shunk, 2008, p. 30).

Like Thorndike, B. F. Skinner (1904–1990) based his operant conditioning on voluntary behaviour. According to Pritchard (2005), “it involves reinforcing a behaviour by rewarding it. It can also work in a negative way, when an undesirable behaviour can be discouraged, by following it with punishment of some form” (p. 9). Skinner placed rats and pigeons in boxes with levers or buttons which could be manipulated by the animals to gain access to food. The animals therefore “discovered” that they needed to press (the response) the lever (stimulus) in order to be fed (the reward). However “the amount and frequency of food dispensed were controlled in order to observe the time required for animals to learn to push levers or buttons and to describe how durable that learning was” (Troutman & Lichtenberg, 2003, p. 15).

Skinner was of the view that most human behaviours, including learning, can be controlled by positive and negative rewards. His operant conditioning consisted of two aspects, reinforcement and shaping. Reinforcement strengthens and controls a specific behaviour. Rewards such as food and drink items, small gifts as incentives but also emotional rewards such as praise, or the privilege of having the freedom to exercise choices, can be used to give positive reinforcement to a specific behaviour. Negative reinforcement “is a method of decreasing the likelihood of a behaviour by pairing it with an unpleasant ‘follow-up’” (Pritchard, 2005, p.10). Although negative reinforcement might lead to the desired behaviour in the short term, it may have a negative effect in the long term, as negative emotions such as antagonism, resentment, frustration and irritation can develop from such reinforcement (Pritchard, 2005, p. 10). Shaping is the process whereby a reward is given for a simple task being executed. Over time the complexity of the task is enhanced, but a reward is only given when the advanced task is successfully completed.

Although behaviourism does not focus on the stimulation of mental activities or the understanding of concepts, Pritchard (2005) argues that behaviourism can enhance learning in classrooms, especially when safety awareness is being developed or habits such as the completion of school homework to be inculcated (p. 11). He emphasises that:

To apply models of behaviourism in the classroom, it is necessary to have clear ideas of the behaviours (operants) to be encouraged and reinforced. These behaviours could be either related to general behaviour (in the ‘good/bad behaviour’ sense of the word), or more educational content-related – spellings, tables and so on. (Pritchard, 2005, p. 12)

Troutman and Lichtenberg (2003) caution that while negative reinforcement may well stop the negative action, it may also lead to further negative feelings: “Also, even though punishment such as spanking may extinguish unwanted behaviours, it may also stimulate the development of aggressive behaviour” (p. 14).

- ***Behaviourism and the National Curriculum Statements, Grades R – 3 (NCS)***

Typical behaviouristic activities and learning methodologies, characterized by rote learning and a teacher-centred approach, were not welcomed in Curriculum 2005 where the focus was on an outcomes-based learning approach (South Africa. DoE, 1997a, p. 6)

Although the NCS underwrites outcomes-based principles, it does make provision for rote learning in the foundation phase. Teachers are urged to “structure activities with an awareness that the learner can count by rote and recognise and say number names and symbols for larger numbers than the learner is able to use for calculation and solving problems” (South Africa, DoE, 2002a, p. 8). Teachers are also encouraged to

use teaching strategies such as drill and practice to consolidate the learning of mathematical concepts (South Africa, DoE, 2003b, p. 64). Instructions and the copying or following of an example or a pattern can also be regarded as behaviouristic learning strategies. When implementing the numeracy milestones (South Africa, DoBE, 2010a), Grade R teachers are to ensure that Grade R learners count everyday objects, copy patterns, build their own constructions, measure a variety of concrete materials and follow directions, every term (pp. 12–14).

- ***Implications of Behaviourism in a Grade R classroom***

A belief in the basic tenets of behaviourism is most obvious in the practice of following a daily programme in a Grade R classroom. The daily programme ensures that young learners know what is expected of them: “a consistent daily programme helps them to know what will happen throughout the day” (South Africa, DoE, 2008a, p. 14). Although the daily programme sometimes makes provision for flexibility (for example, when learners go on an outing), it is essentially repeated day after day.

Each feature of the daily programme makes provision for reinforcing positive behaviour as well as controlling and rehabilitating negative behaviour. Positive reinforcement plays a pertinent role in the Grade R classroom when the teacher acknowledges and praises a learner for an observable behaviour he/she has displayed, for example, having washed his or her hands after using the toilet. With time, and lots of opportunities to wash his/her hands, the act of washing will become automatic, without the teacher needing to comment on it. Positive reinforcement leads to a learner feeling loved and appreciated. According to Van der Merwe (1998b), learners will only “feel free to play and learn” when they “feel loved and safe” (p. 74).

Behavioural and discipline problems can be controlled and rehabilitated when learners know what is expected of them during each phase of the daily programme. For example, learners are told that they are not allowed to “grab

things like crayons or play-dough away from others” (Van der Merwe, 1988a, p. 40). When a learner does grab equipment from a peer, the learner needs to be made aware of his or her negative behaviour. The learner will be told that the result of his/her grabbing equipment, for example, paint holders, could be the spilling of the paint, and then none of the group would be in a position to finish their paintings. The learner needs to be made aware that he/she must wait for the paint holder to become available. If the learner keeps on grabbing the paint holder, he/she will be removed from that art table until he/she is willing to rectify his/her behaviour, by taking turns to use the paint (Van der Merwe, 1988a, p. 41). The time that the learner is taken away from the activity, should be used by the teacher to ensure that the learner calms down and wants to return to the paint table (South Africa. KwaZulu-Natal Department of Education and Culture (KZN DEC), (n.d.), Module 3, p. 32).

Behaviouristic teaching strategies such as rote learning (counting objectives, singing counting games, reciting counting rhymes) are repeated often during different daily programme features. For example, learners will count how many there are in the class during the register time. Then when the learners are busy with the weather table, they will count, for example, how many learners are wearing shoes. This weather activity can be concluded when the learners recite a counting rhyme. During baking activities, learners will count out how many teaspoons of sugar need to be stirred into the lemon juice to make lemonade. Counting will also be repeated as an activity during snack-time, playing with educational toys and games, as well as when learners play skipping games with a rope.

The movement ring and perceptual activities of the daily programme provide opportunities for learners to copy actions and follow directions. For example, learners need to follow the directions on flash cards when participating in a hurdle race.

Copying of letters and number symbols, whether during a creative art activity or during fantasy free-play time, forms the foundation for later formal writing and reading. One of the main goals of Grade R is to prepare learners for formal reading and writing: “We focus on *emerging Reading and emerging Writing* in Grade R. Learners continually need opportunities to practice the skills of writing concretely” (South Africa. ECDoE, 2008b, p. 30). It is therefore of the utmost importance that the Grade R teacher provides learners with lots of opportunities to repeat activities that will enhance the development of fine and large motor skills.

In the Grade R classroom many opportunities must be given for trial and error learning; for example, a young learner who is matching three-dimensional shapes in a shape holder will discover through trial and error that a three-dimensional square will not fit into the opening of a triangle. Through the experience of trial and error, different concepts, in this example, a square and a triangle, are being formed. When a learner tries to build a tower with building blocks, for instance, he/she will discover through trial and error the importance of weight and height.

It may appear that behaviourism, with its focus on interaction with the environment, is in conflict with mental development. However, this is not the case. Being exposed to a number of hands-on experiences with a variety of learning materials, learners form “associations (*connections*) between sensory experiences (perceptions of stimuli or events) and neural impulses (responses) that manifest themselves behaviourally” (Shunk, 2008, p. 29). However, understanding learning in the Grade R classroom is not exclusively the domain of neuroscience and behaviourism. Constructivism also plays a major role in the Grade R classroom.

### 4.2.3 Constructivism

As social cognitive theories gained momentum in the latter half of the previous century, notions of behaviourism were challenged and questioned. According to Shunk (2008), studies challenging behaviourism and conditioning theories revealed that

people could learn new actions merely by observing others perform them.  
Observers did not have to perform the actions at the time of learning.  
]Reinforcement was not necessary for learning to occur. (p. 78)

Social cognitive theories, which include constructivism, maintain that the social milieu plays an integral part in learning by humans (Shunk, 2008, p. 78). Shunk (2008) points out that “constructivism is an epistemology or philosophical explanation about the nature of learning” (p. 274). Constructivism was founded on the work of Jean Piaget and Lev Semennovich Vygotsky, and subsequently informed by Jerome Bruner’s theory of cognitive development (Troutman & Lichtenberg, 2003, pp. 14, 47).

Branscombe, et al., (2002) view constructivism as

a theory of knowing that emphasises the role each person plays in constructing his or her knowledge rather than absorbing it directly from the environment. The focus is on children’s creation of knowledge rather than on their repeating what others consider important knowledge. This occurs as the individual mentally and often physically acts on the environment. (p. 10)

Pritchard (2005) defines constructivism as

the result of mental construction. That is, learning takes place when new information is built into and added onto an individual's current structure of knowledge, understanding and skills. We learn best when we actively construct our own understanding. (p. 21)

Shunk (2008) underwrites the importance of a human being interacting socially with other people, in order actively to construct his/her own knowledge (p. 237):

understanding is not automatic. Others do not convey information that children simply process rote; rather, children take in information and formulate their own knowledge. They are active seekers and processors of information. (Shunk, 2008, p. 334)

According to Pritchard (2005), constructivist learning requires a learner to acquire and demonstrate his/her knowledge, concepts, skills and attitudes (p. 22). Constructivist learning assumes that a human being constructs mental models of his/her world in order to understand it. These mental models or schemas are the foundation for cognition and reasoning (Pritchard, 2005, p. 26). Pritchard describes these schemas as

a framework with numerous nodes and even more numerous connections between nodes. At each node, there is a discrete piece of information or an idea. The piece of information can be in any one of a range of different forms – image, sound, smell, feeling and so on. Each node is connected to many others. The connections are made as a result of there being a meaningful link between the connected items. (2005, p. 26)

Constructivist learning occurs when items are added and connected to the schema: “The more connections there are within and between schemas, the more construction has taken place and the more it is considered that knowledge and understanding has been gained; that is, learning has taken place” (Pritchard, 2005, p. 26). For new learning to take place, prior knowledge or existing schema need to be activated in order to accommodate or assimilate the new schema or learning (Pritchard, 2005, p. 28).

- ***Jean Piaget***

Jean Piaget viewed cognitive development from a biological and physical perspective (Morrison, 1991, p. 112). According to Anghileri (1995), Jean Piaget regarded children “as active constructors of their own understandings through the processes he named ‘*assimilation*’ and ‘*accommodation*’” (p. 4). Piaget was of the opinion that learning takes place when children experience their surroundings and natural environment through their senses by looking, hearing and touching things. Assimilation occurs when new experiences of the environment are added to their existing understanding of the environment, and they then think and wonder about it. However, when the new experiences or knowledge cannot be accommodated within their existing understanding and knowledge, mental structures are “altered in order to cope with the new experience” (Pritchard, 2005, p. 24). Once the new experience is accommodated and therefore no longer in conflict with the existing knowledge, a state of equilibrium is reached (Pritchard, 2005, p. 24). “In this way they develop understanding and acquire knowledge as an internalized structure of their thinking” (Anghileri, 1995, p. 4).

Piaget viewed children as actively involved in their environment, trying to manipulate it and find answers to problems. Children therefore learn better when they observe, create and are actively engaged with problem-solving activities, than when they are exposed passively to theoretical facts.

[Piaget] stresses the importance of activity in children’s learning and his theories have led to widespread use of manipulative materials in

the classroom, and a focus on problem solving as the basis for learning mathematics, rather than the repetition of abstract taught procedures. (Anghileri, 1995, p. 4)

Piaget highlighted that young children are not little ‘copycats’ of adults but that “maturation, the child’s development over time, also influences development” (Morrison, 1991, p. 113). Morrison (1991) explains that “maturation helps explain why a child’s thinking is not the same as the thinking of the adult, and why we should not expect a child to think as an adult does” (1991, p. 113). Piaget stressed that all children’s learning and growth occurs through four distinct stages of cognitive development (Schwebel and Raph, 1974; Morrison, 1991; Bodrova & Leong, 1996).

He named the first development stage the sensorimotor stage, starting from birth and lasting until approximately the age of two. In the sensorimotor stage the young baby and toddler explore their surrounding environment, primarily through their senses and motor skills. The baby’s cognitive system is

more or less limited to motor reflexes which are present at birth, such as sucking. The child builds on these reflexes to develop more sophisticated behaviour. Children learn to generalise specific actions and activities to a wider range of situations and make use of them in increasingly complex patterns of behaviour. (Pritchard, 2005, p. 22)

Young toddlers begin to grasp that if they do not see an object, it does not mean that it does not exist (Pritchard, 2005, p. 22). The popular game which an adult and a toddler play, namely Peek-a-boo, is an example: the toddler will look for the face of the adult, when he/she is hiding behind a book.

The second or the preoperational stage reflects cognitive development in the young child of two to approximately seven years of age. The preoperational stage is characterized by the child's beginning to use "symbols to mentally represent objects" (Gurney, 1997, p. 10). Pritchard (2005) adds that the young child uses language to communicate his/her ideas and imagination (p. 22). In the preoperational stage it is important that young learners are actively involved in exploring their surroundings and environment in order to acquire and construct their own personal knowledge (Kirova and Bhargava, 2002). Young children of this age are egocentric and cannot understand that another child or adult may have a different opinion or perspective from theirs (Hurlock, 1985, p. 355). Hurlock (1985) states that young children in this cognitive developmental stage "are unable to solve problems involving number concepts or classes of objects" (p. 355).

The third stage, which lasts from seven to about eleven years, is called the concrete operational stage. In contrast with the previous stage, children in the concrete operational stage begin to understand others' view points and multiple perspectives. In this stage, children "can perform operations such as reciprocity and inversion and have gained the ability to solve tasks where conservation is required (the concept that certain properties of an object remain the same regardless of changes in other properties)" (Gurney, 1997, p. 10).

The fourth stage begins at about eleven years of age, when the learner is able to engage with formal and abstract concepts as well as monitoring his/her own thinking in hypothetical situations.

Morrison (1991) points out that four themes can be associated with a Piaget-based curriculum (p. 132). The first theme is that adults need to respect a young learner's way of thinking and "should provide a setting in which the child can think her own ideas and construct her own model of the world" (Morrison, 1991, p. 132). Secondly, a learner's intelligence will only develop to its full potential if

such a learner is actively involved with learning activities. The third theme highlights the importance of concrete objects and experiences with peers and adults by young learners: “children are too often asked to deal with abstractions such as words and numbers when they have no idea what these symbols represent” (Morrison, 1991, p. 132). Finally, an appeal is made to all parents and teachers to ensure that the learning experiences for learners be of a good quality. Learners will only be able to assimilate and accommodate concepts if they can be related to previous experiences: “[i]f the child has nothing to associate an experience to, it is meaningless” (Morrison, 1991, p. 132).

- ***Leo Vygotsky***

Social constructivism includes a social and cultural component to Piaget’s view that learners in their development need to be actively engaged with their environment. “In social constructivist theory, emphasis is placed upon interaction between the learner and others. The others can come in many forms – it is the dimension of social interaction that is crucial to the social constructivists” (Pritchard, 2005, p. 30).

Leo Vygotsky and Jerome Bruner were two prominent psychologists who promoted the social perspective on constructivism. In the social interaction between a learner and others, language as a channel of communication and prior knowledge play a crucial role.

It is an individual’s prior and current knowledge that forms the basis of any contribution to a dialogue. It is with reference to existing knowledge and understanding (schemas) that new ideas and understanding can be constructed in the course of dialogue.  
(Pritchard, 2005, p. 30)

Smith (2001) points out that Vygotsky viewed learning as the result of natural and cultural development:

Natural development influences learning as the result of maturation. Cultural development results from the child's interaction with other members of the culture and is enhanced by the use of language. (p. 17)

According to Bodrova and Leong (1996), Vygotsky emphasised the importance of social interactions in cognitive constructions (p. 28). "For Vygotsky, a child's actions on objects are beneficial for development only as long as they are included in a social context and mediated by communication with others" (Bodrova & Leong, 1996, p. 28). This social interaction and communication not only assists the teacher in identifying what the child understands, but also forms the core of the child's mental functions.

When children use symbols and concepts to think, they no longer need to have the object present in order to think about it. Language allows the child to imagine, manipulate, create new ideas, and share those ideas with others. ... Thus language has two roles; it is instrumental in the development of cognition and is also itself part of cognitive processing. (Bodrova & Leong, 1996, p. 13)

Vygotsky identified two important concepts in social constructivism: the "zone of proximal development" and support by an expert (Pritchard, 2005, p. 30). Pritchard (2005) defines the "zone of proximal development" as "a theoretical space of understanding which is just above the level of understanding of a given individual. It is the area of understanding into which a learner will move next" (p. 30). In order for learning to take place, the learner has to move "into and across the zone and [look] forward to the next level of understanding, which will

involve a similar journey through a newly created zone” (Pritchard, 2005, p. 30). The learner will learn more effectively with the support of another person, either peer or adult, but who is more knowledgeable and skilled than the learner. Riordan-Karlsson (2000) explains that

The adult acts as a scaffold that helps the child progress from the actual developmental level to the level of potential development. During these interactions, most of the learning occurs within the “*zone of proximal development*”. (p. 22)

Bedrova and Leong (1996) confirm that the

concept of ZPD expands the idea of what is developmentally appropriate to include things the child can learn with assistance. Vygotsky argues that the most effective teaching is aimed at the higher level of a child’s ZPD. Teachers should provide activities just beyond what the child can do on his own but within what the child can do with assistance. Thus, the learning/teaching dialogue proceeds slightly ahead of the child’s status at any given time. (p. 35)

The expert or skilled person needs to consider the present understanding of the learner before the learner is confronted with new learning material that is just above his/her understanding, but within his/her grasp. The support that the skilled person is giving to the learner is called scaffolding:

Scaffolding is the process of giving support to learners at the appropriate time and at the appropriate level of sophistication to meet the needs of the individual. (Pritchard, 2005, p. 30)

Scaffolding means that a task is given to a learner who, although possessed of some prior knowledge about the task, struggles with it and therefore needs assistance or guidance from a more knowledgeable and skilled person in order to finish it effectively. As the learner masters the skills appropriate to the task, the level of support and guidance is gradually decreased and “the learner takes more responsibility for performance of the task” (Bodrova & Leong, 1996, p. 41). The support of scaffolding can be rendered through conversation and debate between a learner and the more knowledgeable and skilled other person, or through teaching and learning materials (Pritchard, 2005, p. 30). Pritchard (2005) emphasises the importance of collaborative group work, whether in pairs or small groups, in social constructivist thinking (p. 32).

- ***Jerome Bruner***

Like Vygotsky, Bruner was interested in the role that language plays in cognitive development. According to Bodrova and Leong (1996), Bruner “studied scaffolding primarily in the area of language acquisition” (p. 43). Bruner points out that although parents use mature language and speech when they talk to their babies, they give a variety of contextual support or scaffolding, whereby they “restate, repeat the important words that have meaning, use gestures and respond to the child’s utterances by focusing on the meaning of the child’s utterances and not the grammatical form” (Bodrova & Leong, 1996, p. 43). The zone of proximal development is entered because the parent treats the child as his/her equal and not as a baby or a toddler. “After repeated exposure to more mature language forms within the ZPD, children begin to acquire grammar. Bruner gave this support a specific name, the *Language Acquisition Support System*, or *LASS* (Bodrova & Leong, 1996, p. 43). As more grammar learning is achieved by the young child, a shift takes place, in terms of which the child begins to act out the new learning independently.

The task of the adult or teacher then becomes one of timing the removal of the scaffolding to enhance the child's successful independent performance of the final behaviour. This shift in responsibility is what Bruner has called the "hand over principle", whereby the child develops from being an observer to an active partaker. (Bodrova & Leong, 1996, p. 43)

Bruner is of the opinion that "increasing language facility and exposure to systematic instructions" influences cognitive growth in children (Shunk, 2008, p. 342). Knowledge or intellectual development growth starts as an enactive mode which yields to an iconic mode and subsequently results in a symbolic mode. A child is in an enactive mode when he/she reacts to a stimulus received from the physical environment and acts it out as "motor responses or ways to manipulate the environment" (Shunk, 2008, p. 342). When the child is able to react to stimulus which is not triggered by a physical object or picture, the child is in the iconic mode. The child thinks about the absent object and "their properties separately from what actions can be performed with the objects" (Shunk, 2008, p. 342). Smith (2001) adds that a child in the iconic mode is able to comprehend that his/ her parent may not be present with him/her, but is able to "recall a visual, auditory, or tactile image of the person" (p. 17). The final mode involves the use of symbols such as "language and mathematical notation" for abstract concepts (Shunk, 2008 p. 342). According to Shunk (2008) the implications of Bruner's theory of cognitive growth are that new learning concepts need to be introduced concretely and three-dimensionally in the enactive mode, for example a learner needs to play, manipulate and build with various wooden shapes before two-dimensional pictures of such shapes (iconically) are shown to him or her (p. 343). Finally, the learner is confronted with abstract or symbolic mathematical notation, and he/she will be able to explain that a square has four edges and four sides that are equal in length, without touching or seeing a square.

Bruner emphasises that teachers need to accelerate the cognitive development of learners who experience a backlog or are performing below average, by ensuring

that learners go “through the successive stages as quickly as possible” (Sutherland, 1992, p. 59). He stresses that language can be used when acceleration is taking place (Sutherland, 1992, p. 59).

Bruner advocates a spiral curriculum, which means that in his opinion “any topic can be taught to children of any age in an intellectually respectable form” (Sutherland, 1992, p. 61). The spiral curriculum commences at the sensori-motor level of Piaget when a topic or concept is introduced to a young learner: the young learner experiences the topic with his/her senses. The young learner will be confronted with the same topic during his pre-school years or pre-operational phase, but “language is now associated with the experience” as well as related concepts (Sutherland, 1992, p. 59). “So, with the help of his teacher or playgroup leader, parent and peer group, a child develops preconcepts and later intuitive concepts” (Sutherland, 1992, p. 59). During the foundation phase, the learner will once again be confronted with the same topic or concept, but this time s/he will experience and “understand the concept at a concrete operational level” (Sutherland, 1992, p. 60). The same concept will be re-introduced as a symbol or an abstract concept during his or her secondary school years, when the learner is functioning at “Piaget’s formal operational level” (Sutherland, 1992, p. 60). Bruner views play activities as resources which are concrete and hands-on, contributing to the realisation of his spiral curriculum.

- ***The importance of play***

Vygotsky claimed that one of the natural settings where the zone of proximal development in a young child is most evident is when children play (Berk & Winsler, 2002, p. 52). When a child is playing, he/she is acting out situations that are more advanced than his or her daily situation. The child is imagining him/herself to be more advanced than he/she currently is; for example, a learner will imagine himself to be a building constructor and architect as he builds his own tree house with boxes and wooden planks.

Vygotsky stated that the play of young learners has two characters, namely an imaginative character and a rule character. In imaginative play situations, the young child comes to grips with controlling desires that are not realizable.

Vygotsky pointed out that fantasy play makes its appearance at a time when children must learn to postpone the gratification of impulses and accept the fact that certain desires will remain unsatisfied. (Berk & Winsler, 2002, p. 52)

For example, in a play situation, the learner, who is acting out the role of a puppy, will wait for his/her turn to be fed by another child who is imagining that he/she is the caretaker of the pet shop. According to Vygotsky, all imaginative play encounters have rules which must be adhered to by all players (Berk & Winsler, 2002, p. 54). Fantasy play develops in a child

(1) the ability to separate thought from actions and objects, and (2) the capacity to renounce impulsive action in favour of deliberate and flexible self-regulatory activity ideas. (Berk & Winsler, 2002, p. 54)

When a child imagines a wooden block to be a car, he brackets the traditional meaning of a wooden block and gives it a new imaginary meaning. The importance of replacing the meaning of objects with imaginary meanings is that it prepares the young child for “the much later development of abstract and imaginative thinking, in which symbols are manipulated and propositions evaluated without referring to the real world” (Berk & Winsler, 2002, p. 55). The second characteristic benefit of play is that deliberately suppressing spontaneous desires and adhering to play rules enables the learner to act out social and cultural responsibilities (Berk & Winsler, 2002, p. 55). Berk and Winsler (2002) summarise the importance of play from a Vygotskian perspective as follows:

Through make-believe, children create and extend their own ZPDs, acquiring self-regulatory and socially co-operative capacities by setting goals, regulating their behaviour in pursuit of those goals, and subordinating actions to rules rather than impulse. Vygotsky regarded play as the supreme educative activity of the preschool years. (p. 151)

Sandbergh and Samuelsson (2003) point out that Vygotsky

emphasises that children's play often serves as a re-enactment of what they have seen and heard from adults; however, in play, the child processes these experiences creatively. These impressions are combined, and a new reality, which corresponds to the children's own needs and interests, is created. (p. 7)

Piaget viewed children's play from a physical and maturation perspective, whereby children's play is related to a particular age and developmental stage, irrespective of whether an adult intervenes or not (Jones, 2005, p.198). Sandbergh and Samuelsson (2003) point out that learners absorb and incorporate knowledge and experiences in accordance in a way that corresponds to their age level. Thus a learner will integrate and understand a new concept at the same level as a peer of the same age.

Children assimilate their experiences to a level or a way of being and thinking that corresponds to their age. There is something, given by nature, for each age that is general and stable and that transcends both culture and time. (Sandbergh & Samuelsson, 2003, p. 6)

Piaget argued that learners are most likely to develop to the next level if they are exposed to age-appropriate experiences (Sandbergh & Samuelsson, 2003, p. 7). In accordance with Piaget's idea of age-appropriate experiences, and Vygotsky and Bruner's notion of scaffolding a learner's level of proximal development, it is important to provide the young learner with stimulating and interesting learning activities that are developmentally appropriate. Smith (2001) uses age and individual appropriateness to describe good practice (p. 15). Age appropriateness means that learners of a certain age will be able to understand and physically execute age-specific and -related instructions, for example, a young learner of five years is able to run 20 metres and not ten kilometres. Age appropriateness entails knowledge of the age span of intellectual, physical and emotional development. Individual appropriateness takes into consideration the learner's "special interests, abilities and prior knowledge from home and culture" (Smith, 2001, p. 16). Developmentally appropriate practices emphasise the important role of children's play in cognitive development. "Children should not be rushed to finish a project or hurried from one activity to another. Active exploration and interaction with other people takes time" (Smith, 2001, p.16).

According to Jones (2005), Piaget categorised play into mastery play, symbolic play and games, and related these three categories to the learner's developmental stage (pp. 197-198). Mastery play is apposite to the learner in his/her sensory-motor stage, as he/she is practising to control and master his/her movement (Jones, 2005, pp. 197-198). Symbolic play represents the activities of a learner in the pre-operational stage: he/she engages in make-believe play and gives objects different meanings and functions, for example a block can become a car (Jones, 2005, p. 198). According to Piaget, playing games are only realised when learners are in the operational stage and are cognitively ready to follow the rules of the game (Jones, 2005, p. 198). Jones (2005) points out that Piaget's symbolic play is not the result of a developmental process but, taking Vygotsky's idea of social collaboration into account, rather the result of learners interacting socially and collaboratively (p. 198).

Bruner emphasises the importance of constructive play in order for learners to build up their cognitive understanding. He shares Piaget's view of "a child-centred approach to education linked to discovery learning", but adds that teachers have an important role to play in intervening and modelling the necessary behaviour in their classrooms to ensure that learners are ready for learning activities (Sutherland, 1992, p. 61, Jones, 2005, p. 198). According to Bruner, this readiness for learning can be achieved when physical resources are used by teachers to set tasks for learners, enabling learners to "discover truths for themselves" (Sutherland, 1992, p. 62).

Bruner views play, especially pretend-play situations, first, as a means whereby learners can act out and behave spontaneously without an adult interfering or inhibiting them (Jones, 2005, p. 198). Secondly, in this play situation the learner feels safe to display certain behaviour and engage in actions without fearing that such actions might lead them to feel rejected. Symbolic play enables learners to "work through difficulties and fulfil secret desires at a make-believe level whilst, at the same time, helping children to learn how to cope with rules and social conventions" (Jones, 2005 p. 198). Bruner claims that although symbolic play originally does not have any rules as the learner is simply role-playing and acting out a certain action, attitude or pretending to be a specific character or object, rules are later added to this pretend play (Jones, 2005, pp. 198-199).

Piaget, Vygotsky and Bruner thus all regard play as highly important in early childhood development. The first educator to emphasise that "children can learn through play", however, was Friedrich Wilhelm Froebel (1782-1852), the "father of the kindergarten" (Morrison, 1991, pp. 53, 222). Froebel warned that mere engagement in play does not imply that knowledge has been gained:

Without guidance and direction, and a planned environment in which to learn, there was a real possibility that no learning or the wrong kind of learning might occur. (Morrison, 1991, p. 55)

Play is more than just an activity that children do instinctively:

Play activities are essential to the environment in which children learn concepts, develop social and physical skills, master life situations, and practice language processes. (Morrison, 1991, p. 222)

Morrison (1991) emphasises that, if learning is to take place through play, a variety of planned play activities need to be provided with the necessary play or fantasy equipment. He believes that learners need to be allowed to decide for themselves what and where they want to play, if a learning through play approach is implemented (Morrison, 1991, p. 222). De Witt and Booysen (1994) highlight the importance of providing learners with play activities in which they can find out or discover, explore and communicate (p. 123). By being engaged in play activities, a learner is given opportunities to argue, debate and reflect on the play activities. Through play activities, creativity and independence are fostered (De Witt & Booysen, 1994, p. 123).

Hurlock (1985) suggests that the reason why young learners engage in play activities is because of the pleasure and enjoyment they experience when they are playing. Playing is something they do willingly and freely (Hurlock, 1985, p.290). Hurlock (1985) divides play into two categories, “active and passive amusements” (p. 290). A child derives pleasure from play in which he/she is actively engaged whilst in “passive play or amusements ... the enjoyment comes from the activity of others” (Hurlock, 1985, p. 317).

According to Hurlock, active play consists of free, spontaneous play, dramatic play, daydreaming, constructive play, music, collecting, exploring, evaluation and games and sports (1985, pp. 297 – 301).

- Free, spontaneous play is initiated by children and the play has no rules. Therefore, the child determines what he/she wants to play, when he/she wants to play and how the play is going to take place. “Children continue to play as long as the activity gives them enjoyment and then stop when their interest lags and, with it, their enjoyment” (Hurlock, 1985, p. 297). Exploration plays a big role in free spontaneous play.
- Dramatic play is also called fantasy or make-belief play. In this kind of play, children act out real life situations or situations they have seen on television, big screens, or what they have read in story books and the mass media.
- Daydreaming does not entail physical activity but “like dramatic play, the roles children adopt in their daydreams are dramatic, heroic, fanciful, and remote from daily life”. (Hurlock, 1985, p. 298)
- In constructive play, children use objects and material to make or build a creative product.
- Although listening to music can be regarded as passive play, singing, dancing and performing with music instruments can be regarded as active play. (Hurlock, 1985, p. 300)
- A child derives pleasure from collecting objects, such as stones, shells or stamps.

Collecting is not motivated by a desire to make use of what is accumulated. Thus, collecting is play in the strictest sense because the enjoyment comes more from the activity than from any practical value it might have. (Hurlock, 1985, p. 300).

- Exploration as active play demands that the immediate environment, but sometimes, also remote environments, be explored; this increases “children’s knowledge and encourages them to seek information to supplement the knowledge they gain from their own explorations”. (Hurlock, 1985, p. 301)

In their book, *Die klein kind in focus: 'n sielkundig-opvoedkundige perspektief* (1994, p. 126) De Witt & Booysen note that Sarafino & Armstrong identified six forms of play, distinguished according to their contribution to the development of the whole child. They identified social-affective play as the first form of play, in which learners play a simple game that entails giving and taking. The second form of play focuses on stimulating the senses of sound, rhythm, smell, taste, touch, textures and movement. Discovery play involves using objects to discover what can be done with them, whilst skills are developed in skills development play activities. Dramatisation and role-play assist the learner with forming relationships with other learners. The last form of play that De Witt & Booysen (1994) discuss is competitive play and rituals, meaning play incorporating rules and rituals (p. 126).

In summary, it can be concluded that play is not only an important practical means of enhancing a learner’s zone of proximal development, but also “fosters positive attitudes toward learning” (Lindberg & Swedlow, 1985, p. 63).

To children, play is serious business. Through play, they express what they know, clarify concepts, and organise their knowledge.

Children are naturally curious, and become increasingly so as they play. (Lindberg & Swedlow, 1985, p. 63)

- ***Constructivism and the National Curriculum Statement, Grades R – 3 (NCS)***

The NCS was built on the framework of Curriculum 2005, which advocated “a learner-centred, learner-paced and (learner)-based approach” (South Africa. DoE, 1997a, p. 7). The *RNCS Teacher’s Guide* (South Africa. DoE, 2003b) recalls that the numeracy aims of Curriculum 2005 included the sustained development of perceptions, senses and motor ability, making use of “the learner’s own innate, intuitive and experientially acquired knowledge and ability in number and space as a springboard into continued learning” (p. 57). Curriculum 2005 proposed that learners need “to develop their own approaches to working with number”, building on their own “experience of space, time and motion in their everyday lives in order to assist in structuring and interpreting it through concrete and diagrammatic representation, estimation and measurement” (South Africa. DoE, 2003b, p. 57). Curriculum 2005 emphasised that learning experiences should be enjoyable and viewed working in a group as an essential tool to solve problems (South Africa. DoE, 2003b, p. 57). All these Curriculum 2005 numeracy aims paint a constructivist picture, based on Piaget’s view that learning takes place through the senses (Pritchard, 2005, p. 24) and Vygotsky’s emphasis on the importance of social interaction in order understand a problem (Bodrova & Leong, 1996, p. 28). Another colour is added to the constructivist picture of Curriculum 2005 via Bruner’s plea that play and learning experiences be designed in a manner that will ensure that learners will experience pleasure and stimulation (Sutherland, 1992, p. 59).

The *RNCS Teacher’s Guide* (South Africa. DoE, 2003b) acknowledges the importance of developmental levels:

The physical, emotional and intellectual development of these learners does not necessarily progress in a fixed manner, but

happens in spurts. The different developmental processes are not synchronized. ... Some learners are also late developers and therefore, the growth pattern of the individual learner needs to be taken cognisance of. (p. 19)

Piaget and Bruner with his idea of the spiral curriculum regarded developmental levels important for cognitive development, whilst Vygotsky and Bruner thought that learners need to be stimulated above their current level of operation.

The *RNCS Teacher's Guide* (South Africa. DoE, 2003b) emphasises the fact that learners come with prior knowledge to their classrooms (p. 60). Previous learning and understanding play an crucial part in constructivism, in that new knowledge, according to Piaget, is added to existing knowledge through the processes of assimilation and accommodation (Pritchard, 2005, p. 24).

The *RNCS Teacher's Guide* (South Africa. DoE, 2003b) concurs with constructivist principles, such as active learner involvement, problem-solving, thinking, and reasoning, when it advises that learning activities need to be learner-paced, and that learners

need to be actively involved in the solving of problems, constructing of objects, and measuring, comparing and reasoning activities, and they need to explain their actions and thinking at their level. (p. 19)

Vygotsky's "zone of proximal development" (Pritchard, 2005, p. 30) is acknowledged when the *RNCS Teacher's Guide* (South Africa. DoE, 2003b) recommends that instructions and tasks need to take into account a learner's abilities (p. 19).

Although the *RNCS Teacher's Guide* (South Africa. DoE, 2003b) agrees that numeracy concepts need to be abstract, it observes that “the use of concrete objects and apparatus in the early years – indeed in all years – can contribute to the development of understanding and must therefore be encouraged” (p. 63). Thus the *RNCS Teacher's Guide* (South Africa. DoE, 2003c) advises teachers to provide learning activities in which learners will make use of mathematical tools and educational resources, whether bought or self-made (p. 61). Bruner stresses that “[i]t is not necessary to supply expensive equipment. Even simple pieces of urban junk can be stimulating to preschoolers” (Sutherland, 1992, p. 62).

Gurney (1997) views the “constructivist approach to mathematics teaching is ... the most popular approach to the learning and teaching of mathematics in primary schools in South Africa” (p. 2). In teaching numeracy, the *RNCS Teacher's Guide* (South Africa. DoE, 2003b) encourages teachers to make use of teaching strategies such as:

- Problem posing and problem solving
- Investigation
- Observation,
- Modelling
- Reading
- Group work (p. 64).

All these teaching strategies are in line with the constructivist principles of social interaction and active learner involvement.

The *RNCS* (South Africa, DoE, 2002a) makes it clear that an outcomes-based education stipulates outcomes that “encourage a learner-centred and activity-based approach to education” (p. 1). According to Mathematics Learning

Outcome 1, number concept is developed by young learners when they are physically manipulating objects so as to “[count], partition and combine quantities, skip count in various ways, solve contextual (word) problems, and build up and break down numbers” (South Africa, DoE, 2002a, p. 8). Furthermore, a teacher needs to provide learners with opportunities to practise mental calculations as well as “judge the reasonableness of answers” (South Africa, DoE, 2002a, p. 8).

Mathematics Learning Outcome 2 requires the learner to investigate patterns and relations. The *RNCS* (South Africa, DoE, 2002a) explains that investigation entails “mathematical thinking skills such as generalising, explaining, describing, observing, inferring, specialising, creating, justifying, representing, refuting and predicting” (p. 9). Investigating and its mathematical thinking skills are typical constructivist skills for cognitive learning. Piaget and Vygotsky maintained that learners need to be engaged actively, in gaining knowledge and skills when they discover things but also by communicating their investigative findings. Gurney (1997) adds that

Discovery learning is a problem-solving, learner-centred approach which emphasises the acquisition of skills at an individual pace and where thinking is central to the learning process. Students are meant to discover things for themselves within this approach and the teacher’s role is seen to be that of a ‘facilitator’ whose primary responsibility is to provide materials and to set up situations in which appropriate problem-solving skills and concepts can be ‘discovered’ (p. 13).

The first three levels of Bruner’s spiral curriculum are evident in Mathematics Learning Outcome 3, in terms of which learners are encouraged to manipulate physically “three-dimensional objects and two-dimensional shapes” (South Africa, DoE, 2002a) in order to form spatial relationships (p. 10). Mathematics

Learning Outcome 4 echoes this, with an appeal for learners to measure practically with various concrete objects (South Africa, DoE, 2002a, p. 11).

Although Mathematics Learning Outcome 5 has a physical manipulation aspect to data collection (sorting objects, one-to-one correspondence), “the learner develops the skills to collect, organise, display, analyse and interpret this information” (South Africa, DoE, 2002a, p. 12). Therefore, the learner is not only active in collecting objects but is constructing his or her own knowledge by analysing and interpreting the data collected. Construction of one’s own knowledge is one of the guiding principles of constructivism (Larochelle & Bednarz, 1998, p. 3).

The *Foundations for Learning Assessment Framework Grade R* document (South Africa. DoBE, 2010a) has taken cognisance of important constructivist principles when it prescribes that teachers assess learners as they count and physically order objects, copy patterns with physical objects, build freely with concrete materials and recognise “symmetry in self and friends using mirrors” (pp. 12–14). Besides making use of concrete, hands-on experiences with three-dimensional objects and various materials in order to lay the basis for an understanding of numeracy concepts, the document also stipulates that learners are to be assessed on their problem-solving skills (South Africa. DoBE, 2010a, pp. 12-14). Learners need to share their problem-solving strategies verbally with others. It is also expected that teachers will assess learners on their ability to collect and sort objects according to specific features and attributes, as well as their ability to record their collection and answer questions about it (South Africa. DoBE, 2010a, pp. 12-14).

- ***Implications of Constructivism in a Grade R classroom regarding the teaching of Numeracy***

Before any numeracy is taught in the Grade R classroom, the teacher should reflect on her own “beliefs about learning because the curriculum they plan must”

not only be closely tied to the ways in which children learn but also meet the needs of individuals (Branscombe, Castle, Surbeck, & Taylor, 2002, p. 15). Bodrova and Leong (1996) agree with Branscombe et al., that the ideas, beliefs and perceptions of teachers have an effect on how young learners learn and construct (p. 12). Branscombe et al. (2002) express their concerns regarding a pre-designed curriculum which is rigidly implemented according to prescribed steps:

the assumption is that the goal is to internalise a body of information in a particular order and often in a particular form. Teachers who use this approach are likely to believe that the learning is a process of taking something from the environment and memorizing it rather than constructing it based on the individual's own actions and interactions. (p. 15)

Campbell (1997) emphasises that “it is important for each child to confidently think, reason, and explain mathematically” (p. 24). However, Vygotsky warned that the teacher must “consider the child’s developmental level and also present information at a level that will lead the child into development” (Bodrova & Leong, 1996, p. 12). Failure to do so may result in teachers’ misjudging the “moment when children are ready to learn and consequently present material that is frustrating difficult” (Bodrova & Leong, 1996, p. 12). The constructivist teacher needs to understand that she cannot force mathematical knowledge and skills upon Grade R learners, but she can help these learners to construct mathematical knowledge by observing, asking questions, encouraging them and making “suggestions to extend [their] thinking” (Branscombe et al., 2002, p. 20). It is not only expected of the teacher, seen as a facilitator, to guide and assist the efforts of young learners to articulate and convey the ways in which they approach a mathematical problem, but also to invite learners to address mathematical problems in various ways and contexts (Yackel, Cobb, Wood & Merkel, 1990, p. 42).

One of the major implications of constructivism in the Grade R classroom is that the teacher needs to recognise that her learners are not mini adults and have their own way of thinking which differs from the adult way. The teacher needs to understand that the learners in her class may not necessarily have the knowledge that she assumes them to have (Kirov & Bhargava, 2002). Alternatively, she should not view them as little computers into which she must transfer all her knowledge and skills in order for them to become knowledgeable and responsible. According to Clements and Battista (2002) “learning mathematics should be thought of as a process of adapting to and organising one’s quantitative world, not discovering pre-existing ideas imposed by others” (p. 6). Therefore, a variety of opportunities must be provided to young learners in order for them to discover and investigate their surroundings and environments. In this exploration of the environment the learner will use his or her current knowledge and relate new information to that knowledge (Branscombe et al., 2002, p. 10).

Another implication of teaching numeracy in a Grade R class is that the classroom will have a certain noise level due to learners talking to each other. This echoes Vygotsky’s belief that children think when they talk (Kirova & Bhargava, 2002, no page number). Anghileri (1995) emphasises that

it is not appropriate to have children working always in silence on their own problems. They must learn to express their own thoughts and to listen to the thinking of others. Learning mathematics will take place as they relate new problems to those they have experienced in some sensory manner, visual, tactile or aural. (p. 6)

Gurney (1997) advises that young learners need to be provided with a variety of opportunities to talk mathematically, in order for them to become familiar with mathematics language and the way in which it is used (p. 6).

A further implication of teaching numeracy in a constructivist Grade R classroom is that the teacher should teach in a manner which is learner-centred, learner-based and learner-paced. The learner is actively involved in the learning activities which are interesting to him/her. Sometimes he/she will be involved as an individual and other times being part of a group, which takes place in a carefully and purposefully planned and stimulating environment. Stigler (1988) stresses the importance of presenting mathematical activities according to the learner's pace and to focus on quality rather than quantity.

The relaxed pace of learning in Japanese classrooms, combined with the high level of achievement, is a fact worthy of more consideration and more research. Perhaps it is our hurry to get through all the problems in the textbook that makes the "spiral" curriculum necessary. Understanding takes time, and perhaps spending that time at an early stage will lead to future benefits. (p. 57)

The teacher is not in the background as a childminder, nor is she lecturing the learners. The teacher assumes the role of a facilitator, mediator and planner of the process of gaining knowledge and skills. She is mindful of the manner in which Grade R learners learn mathematical concepts, such as the fact that young learners investigate, discover, explore, experiment and think whilst they "interact with the environment, including classroom materials, the people in the environment, and the ideas of those people and of the teacher" (Branscombe et al., 2002, p. 15). In her planning, the teacher needs to ensure that she allows enough time for learners to explore and discover. She should also ensure that learners have access to an environment or space in which they can explore and discover (Branscombe et al., 2002, p. 15).

The social-constructivist theory and its impact on cognitive development, as advocated by Vygotsky together with the emphasis on the zone of proximal development, encourages Grade R teachers teaching numeracy to engage all

Grade R learners in active learning activities, where their spontaneous and/or deliberate communications with each other or with the teacher, will enhance their understanding of concepts to which they are exposed to during the activities. Therefore, the Grade R classroom should be buzzing with learners engaging in various activities of interest to them. The teacher should verbally invite and challenge learners to act out their inquisitiveness and to solve problems. The young learner's own instinctive mathematical judgment and thoughts will become increasingly abstract and prevailing if he/she is interacting with mathematical activities, together with his/her friends. "Constructivism is seen as a culture in which students are involved not only in discovery and invention but in a social discourse involving explanation, negotiation, sharing, and evaluation" (Clements & Battista, 2002, p. 6). When a learner interacts with the teacher and other learners, the learner uses language to verbalise his/her understanding and collaboration to find mathematical solutions to a problem (Yackel et al., 1990, p. 42).

According to Chambers (1995) the way in which a teacher communicates has changed from the traditional way of teaching mathematics, where the teacher talked, described and showed the steps in addressing a mathematical problem whilst the learners observed and copied her procedures, to a way where "the teacher listen[s] carefully to children and then use[s] their thinking in making instructional decisions" (p. 39). Although the teacher has the responsibility to establish an environment conducive to learning, learning will not occur just because the teacher tells the learners how to act, think and respond. Learners need also to learn from each other. The focus is thus more on listening to learners and describing how they think, than on explaining to learners how the teacher thinks (Chambers, 1995, p. 39).

Like Chambers, Kazemi (1998) emphasises that the actions of the teacher play a crucial part in the introduction of numeracy in Grade R (p. 44). Kazemi (1998) underlines the fact that mathematics teachers do not want learners just to recite facts and execute computational procedures, but to *understand* mathematics (p. 44). However, exploration and having fun with mathematics may not necessarily

lead to deep thinking and greater conceptual understandings (Kazemi, 1998, p. 44). The teacher needs to help young learners to build on their thinking in order to increase the learner's problem solving and conceptual understanding (Kazemi, 1998, p. 44). Gurney (1997) stresses that it is "essential for teachers to know how to present tasks to pupils in ways that are unfamiliar in terms of content or form. They need to know how to bridge content and form for learning to take place" (p. 15). Vygotsky observed that the guidance and support of the teacher for the learner, who is making the discoveries, can assist the learner to a higher level of making sense of his discoveries. There is no sense in exposing learners to knowledge, concepts and skills that they have already achieved. There is thus no motivation for learning to move from the "known to the unknown or to". (Gurney, 1997) raise the understanding to new heights (pp. 14-15).

Clements and Batista (2002) feel that the Grade R teacher should support young learners to become independent and self-motivated and to invent mathematical ideas "from their own explorations, thinking and participating in discussion", in order to make personal sense of mathematical activities (p. 7).

Hence, it is not the case that the teacher is in the background and the young learner accidentally discovers a mathematical insight. "The skill of the teacher has a definite influence on the way in which students develop their mathematical understandings" (Gurney, 1997, p. 7). Although the teacher is guiding and directing the learning by, for example, asking open-ended questions or focussing the learner's attention in another direction by offering appropriate tasks, it is the learner him/herself who is actively making meaning and sense of the mathematical activity (Clements & Battista, 2002, p. 6). Gurney (1997) emphasises that the learner should also be given an opportunity to reflect on his/her learning and how he/she has come to master the new knowledge (p. 15). In this regard, the teacher plays a role as a mediator and facilitator by co-verbalising and supporting the learner in the developmental process until the learner is able to exercise and apply the new learning independently.

A further implication of teaching numeracy in a constructivist Grade R classroom is that the teacher should create a numeracy learning environment with a variety

of numeracy opportunities and resources, and which permits learners to exercise decision-making and choices (Kirova & Bhargava, 2002, unpaginated).

Kirova & Bhargava (2002) point out that “although high-quality learning in the preschool years is often informal, this informality does not imply an unplanned or unsystematic program. Mathematics learning in preschools should be thought-provoking, should include opportunities for active learning, and should be rich in mathematical language” (unpaginated). Branscombe et al. (2002) stress that teachers who simply tell learners what to do are robbing them of “rich opportunities for learning to which children are entitled”: the transmission of information does not necessarily assist in the learning process (p. 26).

The Grade R teacher needs to consider the daily programme, the classroom and the outdoor play-area when she plans numeracy learning activities for her learners. The daily programme provides a framework for both active and more calm and restful activities. “It is important to structure each day. This determines what kinds of interactions children have with their classmates and with the teacher during specific times” (South Africa. DoE, 2008a, p. 14). The daily programme also makes provision for mathematics to be integrated with other learning programmes such as literacy and life skills.

The indoor classroom should be print-rich, by having numeracy posters, a weather chart, calendar, number names and symbols from one to ten, counting rhyme charts and learners’ work displayed on the walls. The *Grade R Guideline* document (South Africa. ECDoE, 2008b) emphasises that “TABLES AND CHAIRS SHOULD NOT BE ORGANISED IN ROWS WITH A TEACHER’S TABLE IN FRONT OF THE CLASS” (p. 8). The document (South Africa. ECDoE, 2008b) advises teachers to have an informal layout in the classroom which includes a literacy, a numeracy and a life skills activity centre (p. 9). Branscombe et al., (2002) agrees with the *Grade R Guideline* document (South Africa. ECDoE, 2008b) that teachers need to set up learning centres which take

into account learners' interests, rather than just sit behind a table, observing "the children and doing paperwork while requiring children to sit at their desks doing paperwork" (p. 20).

In the numeracy activity centre the teacher should provide the learners with a variety and sufficiency of mathematical equipment and resources, so that they can discover, invent, explain, negotiate, share, evaluate, reflect and solve problems (Chambers, 1995, p. 6), as well as "experiment, explore, construct, and work with concrete materials" (Kirov & Bhargava, 2002, no page number).

Chambers (1995) warns teachers not to provide learners with only "paper-and-pencil exercises as it leads to a social isolation, mechanical repetition, and dependence on the teacher to know if an answer is correct" (p. 10). Theyer and Maggs (1994) add that learners who are engaged in an activity may not necessarily learn from the activity: "Children can be quite happily and busily engaged in doing things without the activity leading very far" (p. 1). Kirova and Bhargava (2002) address Chambers' concerns, as well as those of Theyer and Maggs, by stating that opportunities need to be given to young learners to engaged with "play-based opportunities to develop and deepen their conceptual understanding of mathematics" (p. 1). Therefore, Kirova and Bhargava (2002) highlight the importance of allowing children

time for free play that enables them to explore mathematical concepts.

While children are engaged in an activity, the teacher can observe and then become active in guiding their learning. This interaction will help the children's progress from behavioural to representational understanding of mathematical concepts. (unpaginated)

The *Grade R Guideline* document (South Africa. ECDoE, 2008b) recommends that the following Numeracy activities, in conjunction with the Mathematics

Learning Outcomes (South Africa, DoE, 2002a) be presented to a small or whole group class, namely:

- music activities;
- dramatisation of counting rhymes;
- discussion of mathematical, science and technology themes;
- experimentation with science and technology;
- weather discussions;
- birthday discussions;
- movement activities which focus on position in space;
- measuring water and sand;
- counting activities;
- painting;
- modelling with dough;
- cutting and pasting;
- puzzles, educational toys and games;
- constructive play;
- reading and/or paging through books (p. 17).

These activities can be presented in a fifteen-minute discussion ring focussing on greetings, registers, the weather chart, devotions and birthday and duty charts. The discussion activity will take place after the learners have arrived at school and had some time to do what they want. Learners need to spend approximately fifty minutes on creative indoor activities or “work time” as the *Grade R Practical Ideas* document names it (South Africa. DoE, 2008a, p. 21). The focus of creative activities or work time is, first, on providing the learners with the opportunity to choose where they want to interact with the material (South Africa. DoE, 2008a, p. 20). Secondly, learners are given the opportunity to communicate and express themselves whilst they develop numeracy and fine motor skills. The *Grade R Guideline* document (South Africa. ECDoE, 2008b) makes it clear that the teacher is not to “do the artwork for the learners or edit it (correct it for them)” (p. 11). The teacher is strongly discouraged from insisting “that all the learners draw/paint the same picture for example of a doll or a car. The learners should be allowed to be creative” (South Africa. ECDoE, 2008b, p. 11). Learners

will again be exposed to numeracy activities as a small or whole class group for thirty minutes, before being allowed to engage in free play outdoor activities (South Africa. ECDoE, 2008b. p. 17).

The outdoor-play area also needs to provide the learners with opportunities to explore, experiment, discover and solve problems. The teacher should ensure that learners can choose which activity they want to be involved with as well as provide structured numeracy activities for them (South Africa. ECDoE, 2008b, p. 17). Outdoor play activities include the refinement and exercising of large motor muscles as learners run, hop, slide, climb, crawl, play with balls, swing on swings, and balance on balance beams. Other play activities for the outside play area may include fantasy play, doing wirework and woodwork, making gardens and experimenting with sand and water, i.e. “senso-pathetic play (water, sand, and mud)” (South Africa. ECDoE, 2008b, pp. 14, 17).

The *Grade R Guideline* document (South Africa. ECDoE, 2008b) emphasises that the outdoor play area should not

**have Outdoor Play at the same time as the break times of the rest of the school.** It is very important for Grade R learners to preferably have their own play area separate from the rest of the school, but ideally attached to their classroom. Such a class should be situated in a position where the noise level will not affect the rest of the school. Outdoor Play needs to be supervised at all times and structured activities need to be provided for Outdoor Play. (p. 14)

Although it has been stressed in previous paragraphs that it is important for learners to engage in play activities that are planned and prepared by both the teacher and her learners, Jones (2005) draws our attention to the fact that this is not happening in many schools (p. 201). One of the apparent reasons for this is

that teachers have limited insight of the importance of play, and lack the skills to implement learning through play activities (Jones, 2005, pp. 201-202). Furthermore, many teachers do not know how to justify play time when school and outside authorities challenge them to focus on a more formal approach, teaching learners to read, write and do arithmetic (Jones, 2005, p. 202). It was found that teachers would rather spend their time teaching numeracy than allowing learners to engage in play activities (Jones, 2005, p. 202). Jones argues that one of the reasons why teachers preferred a teaching approach that was more formal and direct, is that the formal approach has measurable results whilst the results of free play cannot easily and directly be determined (2005, p. 202). However, even in classes where free-play activities did take place, many teachers do not enter into any conversations with the learners (Jones, 2005, p. 201).

Yet despite what practitioners say, the status of play remains low and practitioners are unconfident about either articulating the argument for its inclusion or engaging in the actual practice of teaching and learning through play. This suggests strongly that they are paying lip service to the value of play. (Jones, 2005, p. 203)

The *Baseline Study Report* (South Africa. ECDoE, (2008a) reveals that very few Grade R practitioners are implementing quality ECD programmes (pp. 8, 96). This *Report* (South Africa. ECDoE, 2008a) has found learners to be passive and not actively involved in exploring and discovering activities. Learners were playing listlessly, without the play environment having been planned and prepared with educational toys and equipment to enhance learning through play (South Africa. ECDoE, 2008a, p. 89).

The majority (57%) of **Reception Year** classes were found to be not conducive to children's positive development within the three domains of psychomotor (sensorial and physical), socio-affective (social and emotional) and cognitive (building of synapses

between brain cells for positive learning) development. (South Africa. ECDoE, 2008a, p. 9)

It is disturbing and upsetting to find that some teachers, despite in-depth research and extensive information on constructivism and learning through play, are not adapting their classroom practice and teaching strategies to embrace this learning theory.

Constructivism and the neuroscience of learning emphasise that learners learn differently, sometimes uniquely. There is thus an appeal to Grade R teachers to adapt their teaching strategies and take into cognisance the needs as well as the interests of young learners, in order to enhance the learning of every learner. In the next section, the notion of multiple intelligences is discussed in order to find out if it is compatible with the NCS, and if so, how it can be introduced into the Grade R classroom where numeracy is being taught.

#### **4.2.4 Multiple Intelligences**

Multiple intelligences were identified by Howard Earl Gardner when he questioned the traditional emphasis on intellectual supremacy, where the focus was primarily on linguistic and logical mathematical ability (Troutman & Lichtenberg, 2003, p. 20). Gardner argues that intelligence cannot be limited to one or two functions because there is a range of intelligences (Pritchard, 2005, p. 42). Each human being has his/her own range of specific intelligences, which determines in which way he/she prefers learning to occur (Pritchard, 2005, p. 42, p. 44). No specific intelligence is any more important than another. Gardner believes that biological and cultural influences have a crucial role to play in the development of multiple intelligences. "Neurobiological research indicates that learning is an outcome of the modifications in the synaptic connections between cells" (Brualdi, 1996). Each culture values and expects individuals to be skilled in cultural tasks and performances that are important to the specific culture

(Brualdi, 1996, no page number). Huttinger (2001) describes multiple intelligences as “the learner’s biological potential and independent, diverse cognitive abilities” (2001).

Gardner has identified, to date, nine intelligences, but acknowledges that there may be more, yet to be identified. The first intelligence which can be used as a tool to enhance a learner’s learning is verbalisation or linguistic intelligence. This type of intelligence focuses on “a mastery of language” (Brualdi, 1996, no page number). The second intelligence, namely logical-mathematical intelligence, focuses on the logical thinking and the identification of patterns as well as to “manipulate numbers, quantities and operations” (*Multiple Intelligences*, n.d.). The third intelligence emphasises enjoyment and the capacity to listen to, play and compose music. Bodily kinaesthetic intelligence is the fourth intelligence; it includes “touch and movement, dance, sport and other practical activities” (Pritchard, 2005, p. 42). The fifth intelligence is visual/spatial, and embraces abilities such as of drawing, painting, creating images and constructing. Pritchard (2005) adds that the ability to build puzzles also belongs to this type of intelligence (p. 43). Interpersonal intelligence refers to the possession of social skills and the ability to have empathy with other people, whilst intrapersonal intelligence is the capacity to understand “one’s own feelings” (Pritchard, 2005) and capabilities (p. 43). The eighth intelligence is naturalistic intelligence, and it entails, among other things, the ability to identify patterns and classify the natural environment. The ninth intelligence is named existential intelligence, and has to do with spiritual perspectives and issues such as “life, death and ultimate realities (Pritchard, 2005, pp. 44).

Gardner’s theory of multiple intelligences has been criticised by some of his psychologist peers. One objection was that it does not “explain why some people are more intelligent than others” (Gardner’s *Multiple Intelligences*, 2006). Some peers questioned the lack of scientific evidence for the theory (Gardner’s *Multiple Intelligences*, 2006). The use of the term “intelligence” is also problematic, and the question is asked whether what is meant is rather abilities, talents or personal characteristics (Chery, n.d.). Despite these criticisms, support for Gardner’s theory has grown amongst educators and policymakers, to the extent that it is necessary to

establish whether the NCS can accommodate the theory of multiple intelligences to enhance the teaching and learning of young learners (Smith, 2008).

- ***Multiple Intelligences and the National Curriculum Statement, Grades R – 3 (NCS)***

The clearest acknowledgement that learners use different learning tools and methods to gain an understanding of numeracy is to be found in the *RNCS Teacher's Guide* (South Africa. DoE, 2003c): “Since different learners have particular and preferred learning styles, every class is certain to contain groups of learners who assimilate information and develop understanding in different ways” (p. 12). The *RNCS Teacher's Guide* (South Africa. DoE, 2003c) advises teachers to accommodate, where possible, a variety of different learning styles, when young learners are exposed to numeracy concepts. Teachers are advised to scaffold learners' understanding and provide them with concrete resources to manipulate (South Africa. DoE, 2003b, p. 36).

Learners who have conceptual barriers often have compensatory skills or attitudes. Give them an opportunity to express themselves in these valid aspects of learning, and do not think of them only in traditionally academic terms. (South Africa. DoE, 2003b, p. 36)

Gardner's theory of multiple intelligences is acknowledged in descriptions of when teachers plan and prepare numeracy activities. The mathematical learning outcomes (South Africa. DoE, 2002a) as well as the requirements of the *Foundations for Learning Assessment Framework Grade R* (South Africa. DoBE, 2010a) challenge learners to make use of their logical-mathematical intelligence when they are engaged in activities such as counting, sorting, problem-solving, reasoning, and identifying patterns. The understanding of numeracy concepts cannot be effectively realised unless learners make use of their linguistic intelligence where they discuss, negotiate and communicate the findings of their numeracy endeavours (South Africa. DoE, 2003b, p. 64). The *RNCS Teacher's Guide* (South Africa. DoE, 2003b) encourages teachers to make use of relevant contexts in the natural environment to enhance numeracy skills (p.

63). Learning through musical and body/kinaesthetic intelligence, for example, will improve the understanding of numeracy concepts when learners sing counting songs and dramatise the actions with their bodies. Mathematical learning outcome 3 accords a high priority to visual and spatial intelligence, whereby young learners are able to draw, paint, build and construct visual and spatial images of numeracy concepts (South Africa. DoE, 2003b, pp. 63-64). Learners with well-developed interpersonal intelligences will enjoy working in a small group when they are engaged with numeracy activities, whilst a learner who prefers to make use of his/her intrapersonal intelligence may prefer to work on his/her own because such a learner is confident about his/her numeracy knowledge and capabilities. The possibility of exercising existential intelligence during a numeracy activity is slim, unless the teacher plans specifically for it by, for example, asking learners to draw time lines of their grandparents', parents', and their own lives.

- ***Implications of Gardner's Theory of Multiple Intelligences in a Grade R classroom regarding the implementation of Numeracy***

According to Matthaai (2010), the reason why "Gardner's theory of multiple intelligences" is useful to a Grade R teacher is as a reminder of the need to provide teaching to fit a learner's preference for a specific learning method. Huting (2002) believes that the learning environment needs to be structured in order for learners to be provided with various learning activities that will engage more than one intelligence. Outside and indoor spaces need to be planned to provide for the different intelligences.

The outdoor learning environment is like an extension of the indoor environment. The outdoor space forms an essential part of the Grade R curriculum. It is therefore just as important as the indoor environment (South Africa. DoE, 2008a, p. 10)

The indoor space needs to make provision for a literacy activity centre where learners will be able to experiment, explore and enhance their verbal and “reading” capacities by paging through magazines and books, including books that focus on numeracy concepts; dramatize puppet shows; trace letters of the alphabet and numeracy symbols, as well as discuss objects relating to the numeracy theme and environmental table. The literacy activity centre should also provide opportunities for learners to scribble or write notes and lists (South Africa. ECDoE, 2008b, p. 10).

The numeracy activity centre should challenge learners’ logical mathematical intelligence. It therefore needs to make provision for activities such as building puzzles, making constructions with Lego blocks, building blocks and other construction materials, counting various objects, tracing and exploring two- and three-dimensional shapes, copying patterns with educational equipment, measuring objects for their length, height and weight, comparing objects according to their attributes, and solving problems (South Africa. ECDoE, 2008b, p. 10, p. 74). It is important that the numeracy activity centre also make provision for a science or environmental table, where learners who are more inclined to learn by using their naturalistic intelligence are able to explore, experiment, discover, predict and draw conclusions. The numeracy activity centre ought to make provision for creative activities such as painting, drawing, threading, cutting, pasting and moulding. By being involved with creative activities which focus on numeracy concepts, learners will make use of their visual and spatial intelligences whilst they experience numeracy concepts with most of their senses.

The Life Skills activity centre focuses primarily on fantasy play, where learners engage in make-believe and role-play. Learners engaged in fantasy play will make use of their interpersonal intelligences. The fantasy play area needs to provide learners with various clothes, kitchen utensils and equipment, furniture, dolls, cars, posters (South Africa. ECDoE, 2008b, p. 10). Numeracy concepts can be enhanced with fantasy play, if such play includes calculating and measuring activities. The Life Skills activity centre also provides learners with opportunities

to relive traumatic life experiences. Such learners will then make use of their existential intelligence in order to gain an insight and awareness of spiritual concepts.

In the daily programme activities, especially during work time and outdoor play time, learners should be given the opportunity to choose which numeracy activity they want to engage in (South Africa. DoE, 2008a, pp. 20-21). By providing learners with opportunities to exercise their own choice making and decision making, teachers will enhance learners' interpersonal intelligence. The learner will not only choose with whom he/she wants to share equipment, but also with whom he/she wants to play or work. Teachers should ensure that they plan and provide activities for learners who, in accordance with their intrapersonal intelligence, prefer to work on their own (Matthaei, 2010). Learners with musical and kinesthetic intelligences, will not only enjoy being involved in music and movement rings, but numeracy concepts such as rhythm, patterns and time should be experienced practically (South Africa. DoE, 2008a, p. 10).

The outdoor play area should be organized in a manner in which the outdoor play equipment and open spaces will be able to cater for most of the intelligences. Learners who have a strength in naturalistic intelligence need to be engaged in outdoor activities where they can explore and discover the environment and collect data; for example, learners may look at what is happening under stones, or go on an outing to a farm and do a drawing to show how many different farm animals they observed during the outing (Matthaei, 2010). The outdoor play area will enhance the development of numeracy concepts when learners are, for example, involved in water and sand play activities where they measure, balance and sometimes float or sink objects. Learners with strongly developed bodily/kinesthetic intelligences will excel in running, climbing, swinging, kicking and hands-on activities.

In summary, the NCS strongly advocates that teachers need to take learners' strengths and weaknesses and preferred learning styles into account when they plan numeracy learning activities. The daily programme and the structure of the indoor and outdoor play areas of a Grade R classroom lend themselves to development of at least eight of the multiple intelligences on a daily basis.

### 4.3 CONCLUSION

This chapter started with a question regarding what learning is, and how learners in a Grade R class should learn. Four learning theories were discussed in this regard.

The neuroscience of learning focuses on learning that takes place in the brain through a physiological process which includes the forming and building of synapses used for communication. Twelve characteristics of the brain were identified, and their impact on numeracy learning and teaching activities in a Grade R classroom were discussed.

The learning theory of Behaviourism, as associated with Pavlov, Thorndike and Skinner, emphasises the role of changing one's behaviour in the learning process. Teachers are advised to use teaching strategies such as drill and practice to consolidate the learning of mathematical concepts, and to make provision for trial and error learning (South Africa, DoE, 2003b, p. 64).

Piaget, Vygotsky and Bruner are mainly responsible for the learning theory of Constructivism. Constructivist learning focus on the acquisition of knowledge, concepts, skills and attitudes through social interaction with other persons and the environment.

The fourth learning theory, namely Multiple Intelligences, focuses on providing learners with different learning and teaching styles and methodologies in order to ensure that each learner's unique preference for a specific learning style is accommodated.

Although it may seem that these learning theories are discrete from each other, in fact, in the context of the Grade R classroom, they are interrelated and build on each other. On the one hand, neuroscience of learning acts as the activator for learning to take place in behaviourism, constructivism and multiple intelligences. On the other hand, behaviourism constructivism and multiple intelligences influence the brain to form neural networks which lead to a change in the brain.

The next chapter describes the research process followed in this study.

## 5.1 INTRODUCTION

The previous chapter demonstrated how important it is for teachers to understand how young learners learn, and how learning theories can be invoked when numeracy is taught in the Grade R classroom. Two important issues arise:

- Is an appropriate foundation in numeracy, as guided by the said learning theories, laid in Grade R? and
- Are teachers, who are expected to lay the foundation in Grade R, sufficiently equipped to teach numeracy in Grade R classrooms?

Using the research process described below, I collect rich and in-depth data reflecting the understanding and experience of Grade R teachers with regard to teaching numeracy.

This chapter describes the research design flow (see Figure 5.1). The Interactive Qualitative Analysis Systems Method Framework (IQA) of Northcutt & McCoy (2003) was tested and adapted during a pilot research study. The first adaptation to the IQA entailed the abandonment of the theoretical coding process as it was too technical and limited a data collection process apposite to this study. The second adaptation to the IQA was the use of audiovisual recordings of classroom activities and their transcription in the data collection and analysis process. Based on the data collection and analysis findings of the pilot research study, I developed my own research model, namely the Adapted IQA method which was used for the Coastal Group A and Coastal

Group B research processes. Finally the research design was evaluated in terms of internal and external validity and ethical considerations. It was concluded that the analysis of the individual interviews adequately revealed each teacher's understanding, perceptions and needs regarding the implementation of numeracy teaching in her classroom.

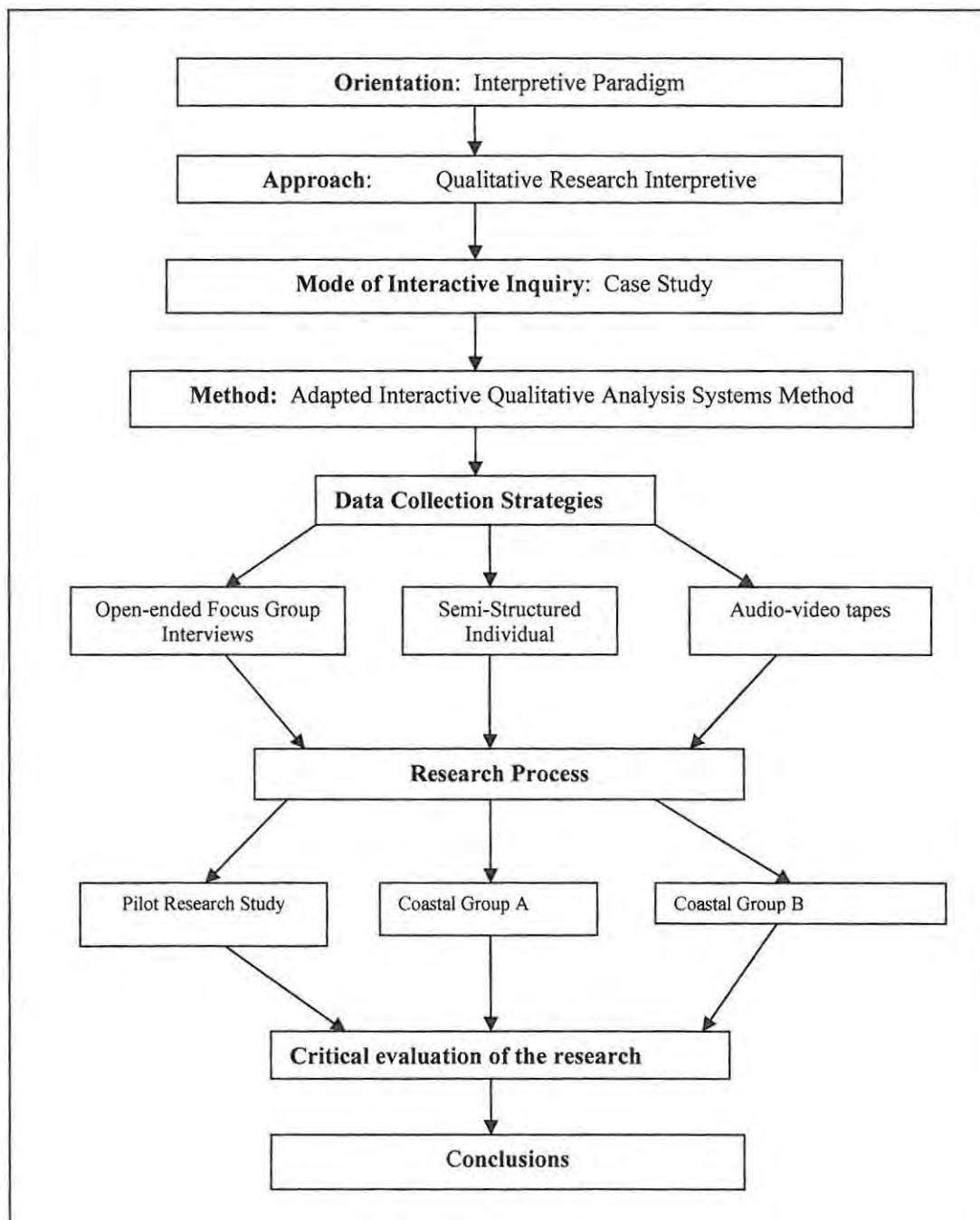


Figure 5.1: Research Design Flow of my Study

## 5.2 THE RESEARCH ORIENTATION, PARADIGM & MODES OF INQUIRY

As stated in Chapter One, I undertook this research study in an attempt to describe and understand Grade R teachers' beliefs, experiences, knowledge and feelings about teaching numeracy in their classrooms. I opted for a qualitative research approach because it is characterised by detailed description of the research phenomenon, data collection and analysis procedures (McMillan & Schumacher, 2001, p. 12). Qualitative research emphasises the understanding, describing and interpreting research events that are unique and unexpected, and prioritises "understanding a social situation from the participants' perspectives" (McMillan & Schumacher, 2001, p. 15). It makes provision for individual voices to be heard, which in this study are the voices of teachers and are seldom heard.

According to McMillan & Schumacher (2001) a setting or place influences human behaviour (p. 16). In this research study, the beliefs, experiences, knowledge and feelings of Grade R teachers are influenced by what is happening in their classrooms. Qualitative research can effectively document this context. It documents the "real events, recording what people say (with words, gestures and tone), observing specific behaviours, studying written documents, or examining visual events" (Neuman, 1997, p. 328). These documentations or data collected are rich and inclusive in its detail and depth. The overall aim of qualitative research is to theorize, collect and analyse qualitative data (Neuman, 1997, p. 328).

I chose to work within the interpretive paradigm as this paradigm enabled me to listen to and describe the beliefs, experiences, knowledge and feelings of Grade R teachers (Henning, Van Rensburg, & Smit, 2004, p. 3). The notions of qualitative and interpretive research "are based on the same philosophical assumption that reality is ever changing and constructed by individuals interacting with their social worlds" (Jackson 2003: 27). The interpretive paradigm revolves around "a concern for the individual" and the "central endeavour in the context of the interpretive paradigm is to

understand the subjective world of human experience” (Cohen, Manion and Morrison, 2002, pp. 19, 22).

Cohen et al. (2002) are of the opinion that “all theories constructed within the context of the interpretive paradigm tend to be anti-positivist” (p. 23). In contrast to the positivists, the “anti-positivists”, which include proponents of the naturalistic, qualitative and interpretive approaches, believe that people cannot be divorced from their actions as they “are deliberate and creative in their actions, they act intentionally and make meanings in and through their activities” (Cohen et al., 2002, p. 21). The “anti-positivist” view emphasises that “the social world should be studied in its natural state, without the intervention of, or manipulation by, the researcher” (Cohen et al., 2002, p. 22).

Lincoln and Guba’s (1985) description of naturalistic reality as “*multiple, constructed and holistic*” is also applicable to the interpretive paradigm (p. 37). The multiple realities in the interpretive paradigm refer to different people’s realities as constructed by their experiences.

Qualitative research is based more on “constructionism”, which assumes *multiple realities* are socially constructed through individual and collective perceptions or views of the same situation. This occurs through the researcher’s participation to some degree in the life of those persons while in a research role. (McMillan & Schumacher, 2001, p. 15)

As a researcher, I believe that my experiences, knowledge and values influence the way I perceive reality. This reality may be the same as or different from the realities of Grade R teachers, as they may have had different experiences to frame theirs. According to the “anti-positivistic” view, I can only understand the behaviour of Grade R teachers if I share “their frame of reference; [for] understanding of individuals’ interpretation of the world around them has to come from the inside, not the outside”

(Cohen et al. 2002, p. 20). The “anti-positivists” emphasise that behaviour is influenced by the context and that “they are ‘situated activities’” (Cohen et al., 2002, p. 22).

According to Cohen et al. (2002), interpretive researchers “begin with individuals and set out to understand their interpretations of the world around them” (p. 3). The interpretive approach is characterised by a “focus on action” (Cohen et al., 2002, p. 23). These “[a]ctions are only meaningful to us in so far as we are able to ascertain the intentions of actors to share their experiences” (Cohen et al., 2002, p. 23). As a researcher, I cannot in isolation construct a clear picture of what happens in the classroom (Kvale, 1996). Both the researcher and participants are involved in the interpretivist research paradigm. It was therefore important to involve Grade R teachers and their perceptions of their “intentions, beliefs, values, reasons, meaning making and self-understanding” (Henning et al., 2004, p. 20). These several perspectives illuminated the complexities of numeracy in the context of Grade R. Henning et al. (2004) urge the interpretive researcher not only to “look for the *way* in which” participants, in this case, Grade R teachers, make meaning of a subject, in this case numeracy, but also to look at how they are making ‘meaning’, and what meaning they are making (p. 20).

The interpretive paradigm stresses the “subjectivity” and “personal involvement of the researcher”, especially when the researcher tries to “understand actions” and “interpret the specific” (Cohen et al., 2002, p. 35). I decided to incorporate Northcutt & McCoy’s interactive qualitative analysis systems method (IQA) as a way to limit my subjectivity and possible bias.

“The “I” and the “A” in IQA stand for interactive and analysis, respectively, which is meant to communicate the systemic relationship of data to analysis as well as the intimate and systemic relationships between the researcher as facilitator and analyst, and the participant as both a source of data and an analyst. Rather than asking the researcher to

shoulder the burden of identifying categories of meaning, the IQA process exploits the participants' own definitions of meaning by using those very categories as the outline for the interviews (Northcutt & McCoy, 2004, p. 199).

In this research study, the IQA method was used in a case study for the purpose of interactive qualitative inquiry. McMillan & Schumacher (2001) describe interactive qualitative inquiry as "an in-depth study using face-to-face techniques to collect data from people in their natural settings. The researcher interprets phenomena in terms of the meanings people bring to them" (p. 35). A case study is defined as a "'bounded system' employing multiple sources of data found in the setting" (McMillan & Schumacher, 2001, p. 36). According to Cohen et al., (2002) a case study portrays the "uniqueness of real individuals and situations through accessible accounts" which can be analysed and interpreted (p. 79). It also "presents and represents reality – to give a sense of 'being there'" (Cohen et al., 2002, p. 79).

The advantages of using a case study as a mode of interactive qualitative inquiry are that:

- It focuses on the rich and in-depth description of individual participants in order to understand and present their perceptions of events; thus data collected is "strong in reality" (Cohen et al., 2002, p. 184);
- A chronological "narrative of events" can be described and analysed (Cohen et al., 2002, p. 182);
- Unique and specific events are highlighted and key actions can be observed.

Sixteen Grade R teachers participated in the research study. They constitute a case because they share the same bounded system through being Grade R teachers who teach numeracy. This case study enabled me to compile detailed descriptions of the case, to analyse the themes and to interpret the findings. McMillan & Schumacher (2001) emphasise the role of the phenomenon in a case study and that "'case' refers to an in-depth analysis of a phenomenon and not the number of people sampled" (pp. 403,

79). Yin (1994) agrees with McMillan and Schumacher (2001) that a case study is about the experiences of a specific group, but adds that these experiences take place in a specific context: “[a] *descriptive case study* presents a complete description of a phenomenon within its context” (Yin, 1994, p. 5). This case study is descriptive and interpretative in nature.

Case study research is characterised by its multiple methods of data collection (McMillan & Schumacher, 2001, p. 41). Northcutt and McCoy (2004) use unstructured focus group interviews and semi-structured individual interviews as data collection strategies in the IQA method (pp. 47-48). According to McMillan & Schumacher (2001) supplementary data collection strategies can include “the use of videos, films, and photographs to capture the daily life of a group under study” (p. 43). McMillan & Schumacher (2001) define supplementary techniques as “approaches selected to help interpret, elaborate, or corroborate data obtained from participant observation and in-depth interviews” (p. 43).

In this research study, I conducted three unstructured focus group interviews with sixteen Grade R teachers and nine semi-structured individual interviews. I made videotape recordings of nine Grade R classroom activities. These data collection strategies helped me to listen to, capture and describe the research phenomena “through the eyes of the participants” in their natural revealed state, without my interfering or manipulating events (Cohen et al., 2002, p. 21). This was done to ensure that I had data which was rich, reflected reality and provided a chronological narrative of what happened when data was collected during the focus and individual interviews and the classroom activities.

## 5.3 RESEARCH PROCESS

### 5.3.1 Participant Selection

I made use of a non-probability convenience and purposeful case sampling strategy (McMillan & Schumacher, 2001, Cohen, et al., 2002).

The selectivity which is built into a non-probability sample derives from the researcher targeting a particular group, in the full knowledge that it does not represent the wider population; it simply represents itself.

(Cohen et al., 2001, p. 102)

Maykut and Morehouse (1994) agree that the focus “is not the generalisation of results, but a deeper understanding of experience from the perspectives of the participants selected for study” (p. 44). The concept of convenience sampling confirms that this kind of sampling is not generalisable to the wider ECD population. Convenience sampling can also be called “opportunity sampling” as it allowed me to choose participants to whom I had easy access (Cohen et al., 2002, p. 102). McMillan and Schumacher (2001) define purposeful case sampling thus: “on the basis of the researcher’s knowledge of the population, a judgment is made about which subjects should be selected to provide the best information to address the purposes of the research” (p. 175).

Northcutt and McCoy (2003) use the term “constituencies” to describe participant selection, based on the question: “Who has something to say about the phenomenon?” (p. 72). They stress that the participant selection for a focus group interview needs to emphasise that the participants “share some common experience, work or have a similar background” and to “have something important in common vis-à-vis the phenomenon” (Northcutt & McCoy, 2003, p. 85).

In selecting the sixteen participants, I envisaged that purposely chosen Grade R teachers and practitioners would be easily accessible and share a rich and in-depth understanding of what teachers experience and what meanings they give to their experiences and circumstances when they develop Numeracy Learning Programmes in Grade R. The participants teach at ECD sites in the same education district in which I work. All the participants adhere to the criteria of the envisaged ECD models as portrayed in the *White Paper 5 on ECD* (South Africa. DoE, 2001, p. 66). These criteria entail:

- all Grade R teachers are to be registered with SACE;
- Grade R teachers/practitioners may teach at a Grade R class at a public primary school or at independent schools;
- Grade R practitioners may teach at a community-based ECD Site;
- Grade R practitioners at public primary schools and community-based ECD sites may apply for a salary subsidy from the Department of Education. These teachers will also receive training and educational equipment.

The terms “ECD practitioner” and “Grade R teacher” are problematic. There is some confusion regarding when or whether a Grade R teacher is an “ECD practitioner” or an “educator”. The difference between a Grade R educator and a Grade R practitioner lies in their qualifications: a teacher with, e.g., a four-year B.Ed degree qualifies as a Grade R educator while one with informal training – e.g. ECD Level 4 – qualifies as a Grade R practitioner (South Africa. Department of Education [DoE], 2007, pp. 13-14). Berg (2008) points out that an “NQF Level 4, which is the equivalent of Grade 12, [is] the minimum qualification a teacher should have in order to teach Grade R and below” (p. 71).

I purposefully selected Grade R educators and Grade R practitioners to participate in this research study in order to collect rich and inclusive data and provide a holistic and comprehensive picture of the experiences of teachers of numeracy in Grade R.

### 5.3.2 Data Collection and Analysis

In this research study, data was collected and analysed in three groups. Group One comprised the Pilot Research. Group Two focussed on collecting and analysing data from participants teaching in the Coastal Group A environment. In order to ensure that the data was rich and comprehensive, the research study was extended to include Group Three, which consisted of participants from Coastal Group B.

Each group consisted of three sections:

- Section One focused on data collected from three unstructured open-ended focus group interviews;
- Section Two entailed the videotaping of Grade R daily programme activities in classrooms;
- Section Three consisted of data collected from semi-structured individual interviews.

See Table 5.1 for an overview of the IQA Groups and sections.

**Table 5.1 IQA Groups and Sections**

| GROUP           | Focus                    | Section One<br>Unstructured open-ended<br>focus group interviews  | Section Two<br>Audio-video tapes of Grade R<br>daily programme activities | Section Three<br>Semi-structured<br>individual interviews          |
|-----------------|--------------------------|---|---|--|
| <b>GROUP 1:</b> | Pilot Research Study     | Participant 1<br>Participant 2<br>Participant 3<br>Participant 4<br>Participant 5<br>Participant 6<br>Participant 7 | Participant 1<br>Participant 2<br>Participant 3                           | Participant 1<br>Participant 2<br>Participant 3                    |
| <b>GROUP 2:</b> | Coastal Research Group A | Participant 8<br>Participant 9<br>Participant 10<br>Participant 11<br>Participant 12                                | Participant 8<br>Participant 9<br>Participant 10<br>Participant 11        | Participant 8<br>Participant 9<br>Participant 10<br>Participant 11 |
| <b>GROUP 3</b>  | Coastal Research Group B | Participant 13<br>Participant 14<br>Participant 15<br>Participant 16  | Participant 14<br>Participant 15  | Participant 14<br>Participant 15                                   |

Data analysis and interpretation began when I planned the research questions and research design. Stake (1995) argues that data analysis is ongoing until the researcher writes up the final report. According to Cohen et al. (2002) the aim of data analysis and interpretation is “to understand the subjective world of human experiences” (p. 22). Rossman and Rallis (2003) define data analysis and interpretation as a

process of deep **immersion** in the interview transcripts, field notes and other material you have collected; systematically **organising** these materials into salient themes and patterns; bringing **meaning** so the themes tell a coherent story; and **writing** it all up so that others can read what you have learned. (p. 270)

Northcutt and McCoy (2003) differ from the traditional view of data analysis, which is that data is generated by the participants but only the researcher is entitled to analyse it (p. 199). The IQA entails that the researcher acts as a facilitator and analyst during the data collection and analysis procedures. However, the participants play an equally important part in both these procedures as they are not only sources of data but also take part in the process of analysis.

Rather than asking the researcher to shoulder the burden of identifying categories of meaning (qualitative researchers often call this *open* or *emergent coding*), the IQA process exploits the participants' own definitions of meaning by using those very categories as the outline for the interviews. (Northcutt & McCoy, 2003, p. 199)

### 5.3.3 Research Flow

The research flow of this study consists of five stages. See Figure 5.2.

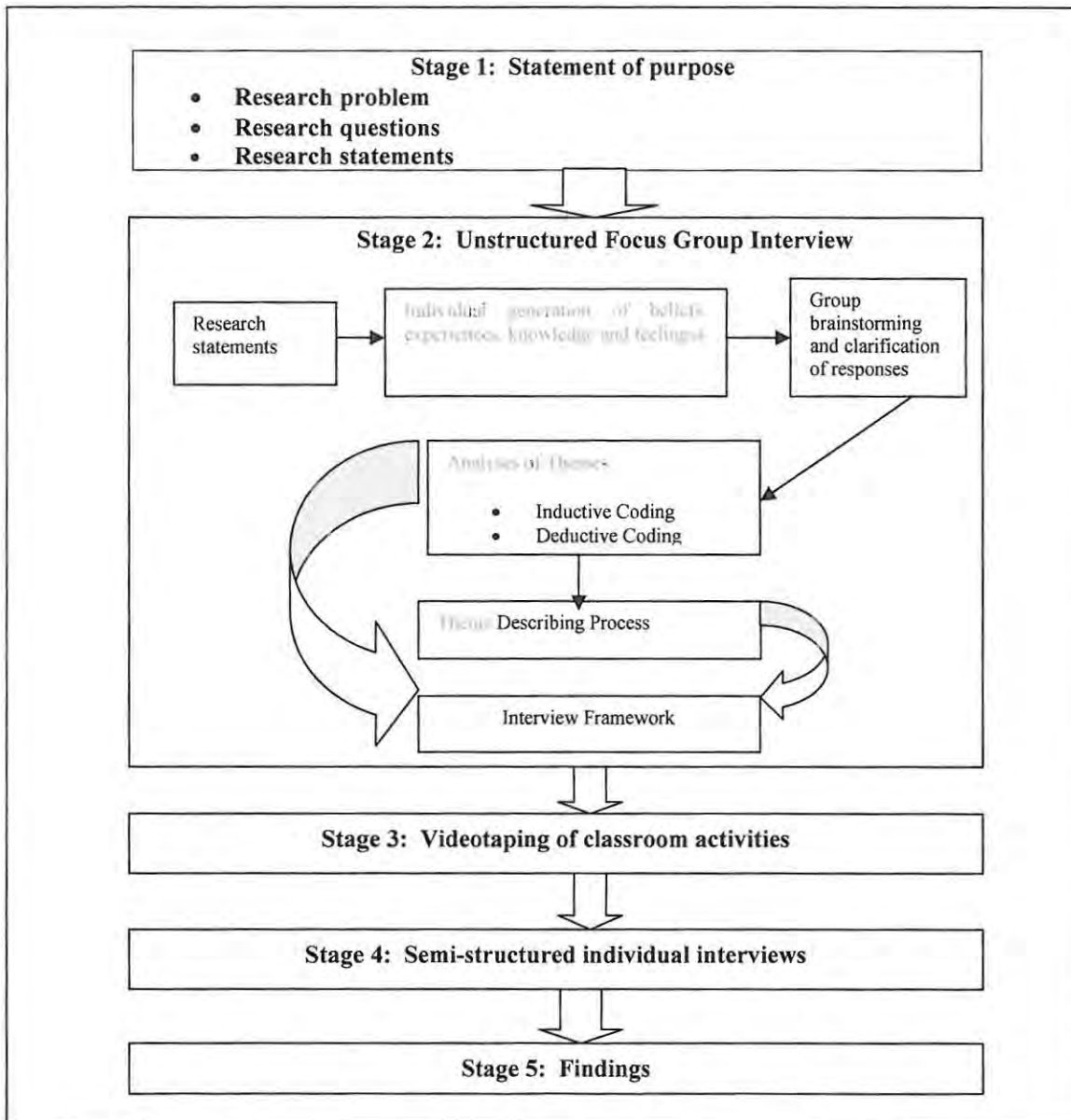


Figure 5.2: IQA Research Flow

- The **first stage** of the research flow was the process of articulating the main purpose of this research study, namely to explore, describe and understand teachers' experiences of teaching numeracy in Grade R. The above-mentioned research problem can be summarised in one question: "What are the experiences of selected teachers of teaching numeracy in Grade R?"

In order to contextualise the empirical investigation of teachers' experiences and challenges in teaching numeracy the following sub-questions will also be addressed:

- What are the challenges that face Grade R teachers when they implement numeracy? and
- How do teachers' experiences regarding numeracy influence and affect their teaching strategies in numeracy?

Basing them on these research questions, I used the following research statements during the silent brainstorming activity of the focus group interview in order to generate ideas, thoughts, perspectives and experiences:

- Tell me what you think of or feel or call to mind when I use the term numeracy;
- Tell me about your experiences of teaching numeracy in your classroom;
- Tell me about the challenges you experienced when you taught numeracy and/or attended numeracy in-service training sessions.

The **second stage** entailed an unstructured open-ended focus group interview which was used to compile the interview framework for stage four: "IQA studies usually begin with a *focus group*, who share some common experience, work or have a similar background" (Northcutt & McCoy, 2003, p. 47).

At the unstructured open-ended focus group interview I read the statements to the participants and requested them to generate themes and descriptions. By making use of an analysis of themes and a theme describing process, concepts were clarified and named. Although Northcutt & McCoy (2003) use the term "affinity", I prefer to use the term "theme" (p. 98). The analysis of themes included inductive and deductive coding.

Inductive coding (also called open or emergent coding) refers to when the participants generate beliefs, experiences, knowledge and feelings on small flash cards. Each card depicts a specific belief, experience, knowledge or feeling. I called these small flash cards segments. Once the participants stopped generating segments, they organized it into groups. “The participants move, sort, and shift the cards into a cluster group until everyone is satisfied with the categories or groups” (Northcutt & McCoy, 2003, p. 98). When I noticed that the participants had stopped sorting or shifting the segment cards, I knew they had saturated their options in placing the segment cards into groups.

Once the affinities are refined and often reorganised by the group participants, they are encouraged to narrow down the meanings of the affinities and their categories. (Northcutt & McCoy, 2003, p. 98)

Deductive or axial coding entailed the refining and re-organising of the segments into groups and thereafter, naming each group as a theme. “Affinities are given titles, as determined by participants, that accurately reflect the meaning of the affinity” (Northcutt & McCoy, 2003, p. 99).

The theme describing process entailed the development of a definition and descriptive paragraph regarding each theme and its segments:

Gathered from the cards and affinities produced, the researcher (or even better, the participants) write(s) a paragraph description representing the general content of the affinities. (Northcutt & McCoy, 2003, p. 100)

After the participants named each group of segments as a theme, they write a definition and/or describing paragraph to each theme, which portrays the gist of each theme and it's segments.

Videotaping of the daily programme activities in the classroom made up the **third stage**. The aim of the videotaped observations was to record how numeracy was dealt with in the Grade R classroom. According to Cohen et al. (2002)

Comprehensive audio-visual recording can overcome the partialness of the observer's view of a single event and can overcome the tendency towards only recording the frequently occurring events. ... Of course, one has to be cautious here, for installing video cameras might bring the problem of reactivity. If fixed they might be as selective as participant observers, and if movable, they might still be highly selective. (p. 313)

In this research study, I used a movable video camera. In order to counteract the problem of reactivity, I was guided by the themes of the Interview Framework which indicated which numeracy activities need to be videotaped.

The **fourth stage** of the research flow consisted of semi-structured open-ended interviews. The interview process was informed by the IQA interview framework, "designed and based on the affinities and subaffinities developed by the focus group members" (Northcutt & McCoy, 2003, p. 48). I read the "focus group's definition of each affinity with the participant and then engaged in a dialogue by saying, 'Tell me what this means to you'" (Northcutt & McCoy, 2003, p. 197). In this process, the participant reflected on each theme and its segments and gave her own explanation and perspective about it.

The **fifth stage** of the research flow consisted of the reporting of the findings.

## **5.4 GROUP ONE: PILOT RESEARCH STUDY**

### **5.4.1 Familiarisation**

Being a novice researcher, I used a comprehensive pilot research process as a testing ground to familiarise myself with data collection and analysing procedures. I used Northcutt & McCoy's IQA data collection method during the focus group and individual interviews (2001). Due to the intensive and over-complicated technicalities involved in Northcutt & McCoys' data analysis procedures, I decided to abandon the "*Theoretical coding*" as it focuses on "the perceived cause-and-effect relationships (influences) among all the affinities in a system" and therefore had little relevance to the purpose of the research study (Northcutt & McCoy, 2001, p. 149).

I also made an addition to the IQA data collection method by including audiovisual recordings of classroom activities. By including videotaped observations, I hoped to collect data that was rich and reflected the realities of teaching numeracy in classrooms.

The pilot research study gave me the opportunity to exercise the different roles I was to play in the study proper. My role as a researcher during the pilot research study varied from "designer to facilitator, teaching the group members the process and guiding them to generate and analyse their own data with minimal external influence" (Northcutt & McCoy, 2003, p. 44).

### **5.4.2 Pilot Group Sampling**

The pilot group consisted of seven participants. Based on my knowledge of the ECD teaching population and experiences with these teachers as a subject advisor, I selected seven participants purposefully, as I felt these participants would "provide the best information to address the purposes of the research" (McMillan & Schumacher, 2001, p. 175). The teachers teach in the same town as I work in and thus it was easy for me to invite them to participate in an unstructured open-ended focus group interview. Bearing

in mind the criteria of the *Education White Paper 5 on Early Childhood Education's* envisaged ECD models (South Africa. DoE, 2001), three Grade R teachers from primary schools, two Grade R teachers from independent ECD sites and two Grade R practitioners from the community-based ECD sites participated in the pilot research study (p. 66). See Table 5.2 for an overview of the selection of the ECD participants in the pilot research study.

**Table 5.2: Selection of ECD participants for the pilot research study**

| <b>Criteria of ECD provisioning according to the ECD White Paper 5</b>    | <b>Grade R Teachers/practitioners at Community-Based ECD Sites</b> | <b>Grade R teachers/practitioners at public primary schools</b> | <b>Grade R teachers at independent pre-primary schools</b> |
|---|--|---|--|
| <b>Participation in the unstructured open-ended Focus Group Interview</b> | Participant 1<br>Participant 4                                     | Participant 2<br>Participant 5<br>Participant 7                 | Participant 3<br>Participant 6                             |
| <b>Participation in the video-taping of classroom activities</b>          | Participant 1  | Participant 2   | Participant 3  |
| <b>Participation in the semi-structured individual interviews</b>         | Participant 1  | Participant 2   | Participant 3  |

### 5.4.3 The researcher's footprint

My role as a researcher during the unstructured open-ended focus group interview and semi-structured individual interviews was three-fold, namely administrator, facilitator and guide.

The first role I undertook was to organise the logistics and administration of the unstructured open-ended focus group interview. It consisted of designing informed

consent forms, organising participating members to sign these forms, organising the venue and seating arrangements and ensuring that stationery and audiovisual equipment was available. In order to conduct the pilot unstructured open-ended focus group interview, I had to comply with the ethics of designing informed consent forms. I discussed with the participants what their roles and responsibilities would be during the interview before they signed the informed consent forms. In preparation for the focus group interview, I organised with a pre-primary school to use a quiet but spacious classroom. I then placed seven chairs in a half-circle formation, facing the researcher, seated at one end of the half-circle formation. I brought the following stationary and tools with me to the focus group interview: 175 blue cards (approximately 25 per participant), 20 A4 pink paper, 15 yellow paper strips, koki pens for each participant, Prestik, as well as the video camera with extra batteries (Northcutt & McCoy, 2003, pp. 84, 85, 88).

The only way for me to perform the second and third roles in this research study was to become a participant observer. According to Maykut and Morehouse (1994) participant observation demands that the researcher is “present in the natural settings where the phenomenon under study takes place” (p. 72). As a researcher, I needed to be present at the focus group interviews and individual interviews. My role changed to that of a non-participant observer in the classrooms when I made videotapes of the daily programmes.

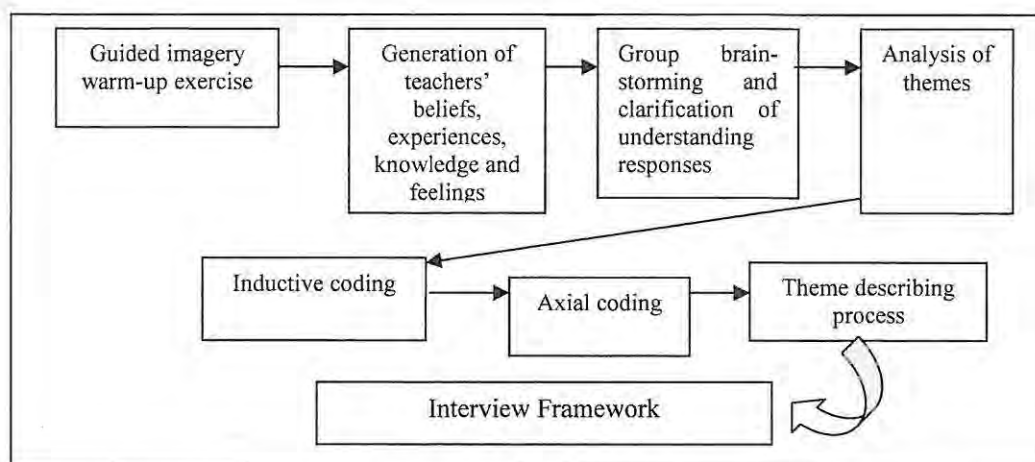
My second role unfolded during the unstructured open-ended focus group interview when I facilitated and taught the IQA process to the group members.

The third role happened simultaneously with the second, but in this case I guided the participants in developing an interview framework. I assisted the participant “members in organising their thoughts into a manageable number of categories or affinities – sets of textual references that have an underlying common meaning or theme, synonymous to factors or topics” (Northcutt & McCoy, 2003, p. 81).

During the recording of classroom activities, I acted as a non-participant observer, who stands “aloof from the group activities they are investigating” (Cohen et al., 2002, p. 187). When learners approached me, I avoided eye contact and changed the direction of the camera to film learners from another angle. I also kept my distance by standing and not bending down to listen to what they were saying. My demeanour resulted in the learners treating me as though I was not there, and allowed me to observe them through the camera lens as they participated naturally and unaffectedly in the daily programme activities.

#### **5.4.4 Pilot Research Data Collection with an Unstructured Open-Ended Focus Group Interview**

To begin the unstructured open-ended focus group interview, I welcomed and expressed my gratitude to every participant for their presence and willingness to participate in the project. I stressed that participants were free to leave the room at any time if they felt uncomfortable with the procedures and content of the focus group interview. I emphasised that all contributions would be kept confidential. I asked the participants for permission to videotape the proceedings, informing them that access to the recording would be restricted to me and my study supervisor. If any transcripts were made, the participants would remain anonymous and distinguished only by number, e.g. participant number 1. The video recording would be kept in a secure safe for at least five years for reference should any queries about it be raised. I explained to the participants that the purpose of the recording was twofold: it would serve both as a true and accurate copy of what was said and done during the interview, and as an example of an unstructured open-ended focus group interview process. This method of data capturing correlates with Maykut and Morehouse’s (1994) view that “qualitative research looks to understanding a situation as it is constructed by the participants. ...qualitative research attempts to capture what people say and do, that is, the products of how people interpret the world” ( p. 18).



**Figure 5.3: IQA Unstructured Open-ended Focus Group Interview**

Figure 5.3, above, depicts the IQA unstructured open-ended focus group interview flow. The data collection process commenced when I handed to each participant a koki pen and a pack of blue paper cards. I explained to the participants the purpose of the focus group interview: to hear from Grade R teachers themselves about their experiences of teaching numeracy in their classes.

I introduced the participants to a guided imagery warm-up exercise, asking them to shut their eyes and picture their own classrooms and their own beliefs, experiences, knowledge and feelings of teaching numeracy. I read the research statements to the focus group and requested that they use the cards to write down their beliefs, experiences, knowledge and feelings regarding the research statements. These cards or segments were then put up on the wall, and the meaning of each clarified through a group brain-storming activity. The clarification activity was followed by an inductive coding process, in terms of which I requested the participants to place the segments into groups. “The intent of this process is to categorise data into thematically organised groupings, referred to as affinities” (Northcutt & McCoy, 2003, p. 98).

After ensuring that there was consensus amongst all the participants regarding the groups, I introduced the participants to deductive or axial coding when I requested them to identify and name emerging themes. In other words, the axial coding process entailed assigning to each group a heading, which was called a theme. The theme

describing process followed the axial coding, when I asked the participants to use the segments of each group and to create with it “a detailed written description or definition of each affinity” (Northcutt & McCoy, 2003, p. 82).

In summary, the data collection process in the focus group interview entailed that the “thoughts of the group as a whole are combined and organised into common themes or affinities by the group itself with the aid of a facilitator” (Northcutt & McCoy, 2003, p. 81).

At home, I transcribed the recording of the day’s data collection procedures. Thereafter, I continued writing up the data collected on the newsprint and flash cards during the focus group interview. The themes, segments and descriptive paragraphs created a framework to be used during the semi-structured individual interviews to elicit personal experiences capable of contributing to a thick description of the phenomenon under investigation.

#### **5.4.5 Pilot Research Data Collection by means of Videotapes**

Data collection through the unstructured open-ended focus group was followed by the video recording of daily activities in three Grade R classrooms. I purposefully selected three participants and their classrooms from the seven focus group participants to be recorded: “[i]t is not our goal to build a random sample, but rather to select persons or settings that we think represent the range of experience on the phenomenon in which we are interested. Thus, it is our working knowledge of the contexts of the individuals and settings that lead us to select them for initial inclusion in our study” (Maykut & Morehouse, 1994, p. 57). The selection of these three participants ensured that the three different models of ECD provisioning were represented (South Africa. DoE, 2001, p. 66).

By making use of multiple data collection instruments, I combined different methods or “ways of looking” to gain a thorough comprehension of what the experiences and

challenges were of Grade R teachers, implementing numeracy in their classrooms (Silverman, 2000, p. 177). According to Denzin and Lincoln (2003) “the use of multiple data collection instruments or triangulation”, which “is the display of multiple, refracted realities simultaneously” can be regarded as an alternative to validation (p. 8). The videotaped observations were not an in-depth look at numeracy per se, but were indicators of teachers’ practice when they implement the numeracy learning programme.

Before the taping of daily programme activities commenced, each selected Grade R teacher was visited, and the aim of the research and the purpose of the audiovisual recording were explained. I made it clear to the teacher that her participation was voluntary and that her identity would not be revealed. I gave the teacher letters addressed to the parents of each Grade R learner, explaining the purpose of the audiovisual recording as well as the procedures to be followed. The parents were requested to give permission for their children to be photographed at school.

On the day of video-taping, I made sure that I had a video camera with spare video tapes. I tried to limit the effect of my intrusion into the natural setting of a Grade R teacher and her learners by setting up the video camera in such a way that it would not draw attention to itself. Guided to some extent by the themes emerging from the focus group interview, I videotaped the daily programme activities of the three Grade R classrooms. At home, I transcribed the activities in chronological order. The audiovisual recording was followed by semi-structured individual interviews.

#### **5.4.6 Pilot Research Data Collection with Semi-Structured Individual Interviews**

The aim of the semi-structured individual interview is

to bring to our attention what individuals think, feel and do and what they have to say about it in an interview, giving us their subjective reality in a ‘formatted’ discussion, which is guided and managed by an interviewer and later integrated into a research report. (Henning et al., 2004, p. 52)

Northcutt & McCoy (2003) ask: “How will the focus or content of the interview be determined?” – and then answer the question by suggesting that the “affinities developed from the focus group” should determine the content of the interview (p. 197). The segments were sorted into groups and a heading was given for each group as a theme. A descriptive paragraph based on the segments of each group was written to explain the theme. An interview framework built up from the segments, themes and descriptive paragraphs was then deployed in semi-structured individual interviews.

The semi-structured interviews followed the videotaping of the daily programme activities, after the learners had gone home. I brought with me to the interview room the interview framework, an audio-tape recorder with sufficient tapes to record each interviewee’s verbal reflection on the numeracy activities in her class.

Before I commenced each semi-structured individual interview, I pointed out to the teacher/interviewee that her participation was voluntary and that she could at any time in the data collection process withdraw from the research. I emphasised that the interviewees were participating anonymously and that there would be no personal reference to them in the recording and analysis of the data collection. I gave each teacher an Informed Consent Form to sign. In this Informed Consent Form the teacher accepted the invitation to participate voluntarily in the research and gave permission for the interview to be recorded.

I began the interview by handing to the interviewee an interview framework consisting of the descriptions of each theme and its segments. I requested the interviewee to recall her personal experience vis-à-vis the theme by saying, “Tell me about your experience with ...” (Northcutt & McCoy, 2003, p. 203). I asked follow-up questions and probed the interviewee to get her fully to share her beliefs, experiences, knowledge and feelings of the meaning of the theme. Before I proceeded to address another theme, I briefly summarized the current theme, as discussed between her and myself (Northcutt & McCoy, 2003, p. 205). Once we had addressed and discussed all the themes on the interview framework, I asked the interviewee whether she would like to add any other theme to the interview framework.

When no further contributions were forthcoming, I reiterated the confidentiality of the interview and thanked the interviewee for her participation in the study (Northcutt & McCoy, 2003, p. 208).

At the conclusion of the interview I transcribed the audio-tape recording of the interview word-for-word, including interjections. I used line numbers to “allow the researcher to refer back to any particular quote from any interview transcript with ease and accuracy” (Northcutt & McCoy, 2003, p. 211). Once all three semi-structured individual interviews had been conducted and transcriptions completed, I proceeded to analyse the pilot interview results.

#### **5.4.7 Data Analysis of the Pilot Unstructured Open-ended Focus Group Interview**

Data analysis in the unstructured open-ended focus group interview occurred simultaneously with the data collection process. Data analysis took place when the seven participants generated themes and descriptions. The focus group participants organised the data inductively and deductively in themes. Inductive coding strategies occurred when the focus group wrote their own beliefs, experiences, knowledge and feelings on cards which were called segments. Deductive coding strategies occurred when the focus group organised the segments and gathered it into themes, portraying their beliefs, experiences, knowledge and feelings of implementing numeracy teaching in Grade R.

#### **5.4.8 Data Analysis of the Videotapes**

I decided also to transcribe the material filmed in each interview participant’s classroom. The transcriptions of the individual interviews were compared with the videotapes and their transcriptions. This was done in order to determine whether the teachers’ practice was consistent with what they professed in the interviews. Paradoxes and inconsistencies were documented.

#### **5.4.9 Data Analysis of the Pilot Semi-Structured Individual Interviews**

Data analysis during the individual interviews occurred when I transcribed the responses of the participants. I looked at the line-by-line transcribed interview scripts for “phrases or statements that define and provide examples of a specific affinity” (Northcutt & McCoy, 2003, p. 242). According to Northcutt & McCoy (2003) the individual interview data is “coded first axially, to produce a richer and deeper description of the ways in which the affinities acquire a personal meaning for different individuals” (p. 238).

#### **5.4.10 Reflections on IQA during the Pilot Research Study**

Northcutt & McCoy’s IQA was adapted to collect and analyse data during the pilot research study (2003). By reflecting on the data collection and analysis methods, I came to the conclusion that certain aspects of IQA would be beneficial to the research study. Making use of the focus group participants to generate data through the brainstorming activity, as well as the subsequent coding and describing of the data into themes and definitions by the participants, may have been time-consuming, but it was very useful in compiling an interview framework that was neither prescribed nor even significantly influenced by the researcher. “The IQA process exploits the participants’ own definitions of meaning by using those very categories as the outline for the interviews” (Northcutt & McCoy, 2003, p. 199).

My decision to include video recordings of classroom activities as another method of data collection seemed to have been a wise one as it made provision for silent and/or emerging themes to surface. Silent themes were themes that came to the foreground when the transcriptions of the individual interviews were compared with their actions in the classroom as captured on video tape. An emergent theme, not noted by the focus group participants, were identified by an individual interviewee as the semi-structured interviews unfolded.

#### **5.4.11 My Research Model: An Adapted IQA Model**

- Taking into consideration my experiences in the Pilot Research Study, I adapted the IQA data collection and analysis strategies, as reflected in Figure 5.2. My adapted IQA model consists of five stages as described in paragraph 5.3.3.

### **5.5 GROUP TWO— COASTAL GROUP A**

#### **5.5.1 Participant Selection**

In preparation for the semi-structured open-ended focus group interview to take place, I decided to extend the research study to include Grade R teachers from the coastal schools in the Grahamstown education district. The pilot research study involved inland Grade R teachers. *Nine participants* representing Grade R classes at town, township and rural/farm schools were purposefully selected as they fell within the criteria of the *Education White Paper 5 on Early Childhood Education*'s envisaged provisioning of ECD models (South Africa. DoE, 2001). Relying on my knowledge and experience of working with the coastal Grade R teachers and ECD practitioners as a Foundation Phase subject advisor, three Grade R teachers from three primary schools, three Grade R practitioners from Community-based ECD Sites and three Grade R teachers from independent schools were invited to the focus group interview. These *nine* participants were selected because I expected them to “provide the best information to address the purposes of the research” (McMillan & Schumacher, 2001, p. 175).

#### **5.5.2 Logistical and ethical arrangements**

Building on my experience gained during the pilot unstructured open-ended focus group interview, I used the same logistical and ethical arrangements for the coastal focus group interview.

### 5.5.3 Unstructured Open-Ended Focus Group Interview

Unfortunately, only five participants were present on the pre-arranged date of the unstructured open-ended focus group interview. I established telephonically that the other four participants were not in a position to attend the focus group interview, as they were upset about the sudden death of a colleague and had to visit the bereaved family to convey their condolences. I decided to go ahead with the focus group interview with the five participants who did respond to the invitation. I decided that a third unstructured open-ended focus group interview would be held with the other four participants three weeks later.

The participants in the second unstructured open-ended focus group interview comprised two Grade R teachers from primary schools, one Grade R teacher from a private ECD site and two Grade R practitioners from community-based ECD sites, as reflected in Table 5.3.

**Table 5.3: ECD participants in the coastal research group A**

| <b>Criteria of ECD provisioning according to the ECD White Paper 5</b>    | <b>Grade R Teachers /practitioners at Community-Based ECD Sites</b> | <b>Grade R teachers/ practitioners at public primary schools</b> | <b>Grade R teachers at independent pre-primary schools</b> |
|---|---|--|--|
| <b>Participation in the unstructured open-ended Focus Group Interview</b> | Participant 8<br>Participant 9                                      | Participant 10<br>Participant 12                                 | Participant 11   |
| <b>Participation in the videotaping of classroom activities</b>           | Participant 8<br>Participant 9                                      | Participant 10   | Participant 11   |
| <b>Participation in the semi-structured individual interviews</b>         | Participant 8<br>Participant 9                                      | Participant 10   | Participant 11   |

I conducted the same administration and ethical protocols as I did in the pilot research study. I again followed the adapted model of IQA research flow as depicted in Figure 5.2. I orientated the participants regarding the aim of the focus group interview, and

began the data generation by reading the research statements as part of a guided imagery warm-up exercise. This activity was followed by the generation and inscription on cards of teachers' beliefs, experiences, knowledge and feelings. A group brainstorming activity took place when these cards or segments were clarified for understanding. An analysis of themes ensued, with the participants engaging in an inductive coding process by placing the segments into groups. Axial coding occurred when the participants refined these groups as themes gave each a heading. Finally the participants embarked on a theme describing process, providing a definition and a descriptive paragraph for each theme.

Once the participants in the unstructured open-ended focus group had given their final approval and no further additions were to be made, I thanked every one for their participation. Finally, I arranged tentative dates with those who were to be involved in the video recording of their daily programme implementation and the individual interviews.

Although data analysis took place whilst the participants engaged in inductive, deductive and theme describing activities, I took the process a step further when I transcribed the coastal unstructured open-ended focus group interview and prepared an interview framework, based on the themes that had emerged.

#### **5.5.4 Videotaping of Grade R classroom activities of Participants 8, 9, 10, and 11**

I decided to make video recordings of the daily programme activities of four Grade R classrooms, representing a Grade R classroom attached to a farm primary school, a Grade R classroom attached to a township primary school, a Grade R classroom at an independent pre-primary school and a Grade R classroom at a community-based ECD site (South Africa. DoE, 2001, p. 66). I purposefully chose these contexts and settings in order to “represent the range of experience of the phenomenon in which we are interested” (Maykut & Morehouse, 1994, p. 57).

The logistics, ethical issues and practical setting up of the video camera were the same as they were in the pilot research study.

At home, I transcribed the recording by giving a chronological description of the activities, comprising when they occurred, who the participants were, and what contributions were made or actions performed. I also described the context in which the activity took place. Thereafter I compared the transcripts of the individual interviews with the recordings of what happened in each classroom in order to determine whether the teachers' practices and implementation of numeracy activities were consistent with what they claimed in the interviews. I documented paradoxes and inconsistencies.

The video recordings were followed by semi-structured individual interviews with the Coastal Group A.

#### **5.5.5 Semi-Structured Individual Interviews Coastal Group A**

Making use of

group processes as a *data collection device* presumes that the researcher can gain useful insights into a socially constructed reality, as reported by members of the group, while the use of follow-up interviews is designed to both elaborate and contrast individual meanings to that of the group.

(Northcutt & McCoy, 2003, p. 16)

The semi-structured individual interviews with participants 8, 9, 10, and 11 were conducted on the same day as the videotaping of the classroom activities. I followed the same *modus operandi* regarding logistical and ethical arrangements as in the pilot research study. Bearing in mind my experience of individual interviews during the pilot research study, I entered into a discussion with the interviewees, requesting them

to describe their personal background and the context in which they were teaching, as well as inviting them to share their beliefs, experiences, knowledge and feelings about the material in the interview framework. Using my adapted IQA research method I closed the individual interviews when no further contributions or additions were forthcoming.

The semi-structured individual interviews underwent a process of data analysis conducted by both the researcher and the interviewees, as we discussed each theme and its descriptive paragraph. The interviewees added, confirmed or differed from what the focus group participants has said, as reflected in the interview framework. I embarked on the data analysis when I transcribed the individual interview audio-tapes.

## 5.6 GROUP 3 – COASTAL GROUP B

### 5.6.1 Participant Selection

**Table 5.4: ECD participants in the coastal research group B**

| Criteria of ECD provisioning according to the ECD White Paper 5    | Grade R Teachers/practitioners at Community-Based ECD Sites | Grade R teachers/practitioners at public primary schools |
|--|---|--|
| Participation in the unstructured open-ended Focus Group Interview | Participant 14<br>Participant 16                            | Participant 13<br>Participant 15                         |
| Participation in the videotaping of classroom activities           | Participant 14  | Participant 15   |
| Participation in the semi-structured individual interviews         | Participant 14  | Participant 15   |

A third unstructured open-ended focus group interview was organised, due to the fact that four of the nine originally selected participants could not participate in the first coastal unstructured open-ended focus group interview, because of the unexpected

death of a colleague. A later date was set and all four participants participated in the interview. These participants represented Grade R classes at primary schools and at community-based ECD sites in the township, as depicted in Table 5.4.

### **5.6.2 Logistical and ethical arrangements**

The same procedures regarding setting up the venue and stationery, obtaining the necessary permission to participate in the research project and the ethical implications of taping the interview, were followed as previously described in the context of the pilot unstructured open-ended focus group interview (see paragraph 5.5.2).

### **5.6.3 Unstructured Open-ended Coastal B Focus Group Interview**

The unstructured focus group interview research flow followed the same pattern as set out in the coastal group A focus group interview (see paragraph 5.5.3). Following the focus group interview, I arranged with two participants (one Grade R teacher attached to a primary school and one Grade R teacher from a community-based ECD site) a date for the videotaping of their daily programme activities and the semi-structured individual interviews.

At home I transcribed the audio-tape of the focus group interview and wrote up all the segments, themes and descriptive paragraphs in order to produce an interview framework for the semi-structured individual interviews.

### **5.6.4 Videotapes of Grade R classroom activities of Participants 14 and 15**

Prior to the day of the videotaping of the daily programme activities, I gave the two Grade R teachers Informed Consent Forms which were to be completed by the parents of the learners as well as by the teacher. These two classrooms were chosen to represent a Grade R classroom attached to a public primary school and a Grade R

classroom at a community-based ECD Site. The Grade R teacher and the practitioner were known to me as active ECD leaders in their communities and ECD Forum.

On the day of the videotaping, I tried to limit my intrusion in the classroom when I set up the audio video camera, ignoring learners who tried to draw attention to them.

Data analysis took place when I transcribed the recording of each individual participant. I compared the transcripts of the individual interviews with the recordings of what had happened in each classroom. This was done in order to determine whether the teachers' practices and implementation of numeracy activities were consistent with what they had said in the interviews. I documented paradoxes and inconsistencies.

The video-tape activity was followed by the semi-structured individual interview.

#### **5.6.5 Semi-Structured Individual Interviews Coastal Group B**

The semi-structured individual interviews with two interviewees from the third focus group followed the same approach as the Coastal Group A individual interviews. The interview framework guided all questions and discussion between me and the interviewee.

Following the interviews, I made transcriptions of the two individual interview tapes. Just as in the Coastal Group A semi-structured individual interviews, a process of data analysis was conducted by both the researcher and interviewees, as we discussed each segment, theme and its descriptive paragraph within the interview framework.

## 5.7 A CRITICAL EVALUATION OF THE RESEARCH DESIGN

Upon reflection, I believe I made the correct decision in locating this research study within the qualitative orientation and interpretive paradigm, as it afforded me ample opportunity to experience the context in which Grade R teachers were teaching and hear what they had to say in their own words.

By making use of the case study mode of inquiry, I was able to group sixteen individual ECD sites under one umbrella or “bounded system” (McMillan & Schumacher, 2001, p. 36). The biggest criticism against the qualitative orientation and more specifically case studies is that the findings cannot be generalized or transferred, in this case to the greater ECD population. McMillan & Schumacher (2001) define generalisability as “the extent to which the findings of one study can be used about other populations and situations – that is, to predict” (p. 17). In order to address generalisability in case studies, McMillan & Schumacher (2001) develop the notion of “*context-bound generalisations*”, in which specific mention is made of the context in which the research was conducted (p. 16). Cohen et al. (2002) agree with McMillan & Schumacher that the context in which specific actions take place is important (p. 138). They interpret generalisability to include “identifiable, specific settings and subjects rather than universality” (Cohen, et al., 2002, p. 138). In this research study, it is not likely that the findings of a study of this nature will be generalisable across populations, but it is anticipated that the findings may indicate certain principles that could be generalisable across contexts. In this study, the point of generalisability is not whether the experiences of the teachers in the study could be expected to be the same as those in other settings. Rather, generalisability refers to possible broad themes that could re-emerge given a certain educational setting and context.

In using convenience and purposive case sampling I selected participants “in the full knowledge that [they did] not represent the wide population; [they] simply [represent

themselves]” (Cohen et al., 2001, p. 102). Maykut and Morehouse (1994) agree that the focus “is not the generalisation of results, but a deeper understanding of experience from the perspectives of the participants selected for study” (p. 44).

Just like external validity or generalization, internal validity can also be problematic in an interpretive paradigm. Internal validity implies

the degree to which the interpretations and concepts have *mutual* meaning between the participants and the researcher. The researcher and participants agree on the description or composition of events, especially the meanings of these events (McMillan & Schumacher, 2001, p. 407).

The interview framework, which was compiled directly from the participants’ beliefs, experiences, knowledge and feelings about themes, prohibited me from interfering with or manipulating the participants’ understanding of the phenomenon. In order to ensure that I did not influence the participants when they generated segments and themes for the interview framework, I used Northcutt and McCoy’s IQA whereby the participants do not only act as sources of data but also take part in the process of analysis.

Rather than asking the researcher to shoulder the burden of identifying categories of meaning (qualitative researchers often call this *open* or *emergent coding*), the IQA process exploits the participants’ own definitions of meaning by using those very categories as the outline for the interviews. (Northcutt & McCoy, 2003, p. 199)

Objectivity was further enhanced during the segment generation and subsequent placing of segments into groups, naming the themes and definition process, as I regularly checked with the participants whether they agree with what have been

generated, placed into groups and whether they are in agreement with what have been generated and written. At the end of each process, be it segment generation, naming of themes and/or defining the themes, the participants were invited to add to any of the data generation processes.

By following the interview framework during the individual interviews, researcher bias was limited and objectivity enhanced. An example that I was not able to manipulate the themes was illustrated when a participant raised another theme, namely discipline, which was not identified in the focus group interview. At each individual interview, the participant was asked whether she agreed with the themes of the interview framework and if she wanted to add other themes to it. All nine participants agreed with the themes of the interview framework as generated previously in the open focus group interviews. It must be noted that total objectivity in the qualitative interpretive research paradigm is not possible. Stake (1988) emphasises that “Subjectivity is not seen as a failing needing to be eliminated but as an essential element of understanding” (p. 45). As the researcher, I was subjectively involved when I selected the participants for the focus group and individual interviews. My subjectivity is also evident when I compared the transcripts of the daily activities with transcripts of the participants’ individual interviews.

Credibility, in preference to the term “internal validity”, can be obtained in this research design by means of triangulation (Shenton, 2004, p. 64). This was achieved by using the data collection method of the interview for all focus groups and individual exchanges (Shenton, 2004, p. 65). Multi-method strategies such as focus group interviews, individual interviews and the videotaping of activities assisted in obtaining different insights regarding the phenomenon under scrutiny. The semi-structured individual interviews helped to produce a true and honest picture of the phenomenon, whilst the videotapes captured the phenomenon in a specific chronological context. Credibility was enhanced when the transcripts of the focus group interview in which they had participated were given to the semi-structured individual interviewees to be rephrased and probed to ensure “that their words match what they actually intended” (Shelton, 2004, p. 68).

Reliability in the data collection and analysis in this research study was obtained by ensuring that I captured through the recordings the “context- and situation-specificity” of each classroom (Cohen et al., 2002, p. 120). Cohen et al. are of the opinion that

Audio-visual data collection has the capacity for completeness of analysis and comprehensiveness of material, reducing both the dependence on prior interpretations by the researcher and the possibility again of only recording events which happen frequently. (2002, p. 313)

By comparing the tape transcriptions with the interview transcriptions an honest and comprehensive picture was obtained of how Grade R teachers go about teaching numeracy in their classrooms.

In order to avoid violating participants’ privacy and reducing them to mere research objects, I adhered to the following ethical considerations:

- I obtained written permission from the Eastern Cape Department of Education to conduct this research study in the Grahamstown Education District.
- I met with all participants in the focus groups and individual interviews and explained the aim of the research study as well as the method of data collection and analysis. I guaranteed confidentiality and anonymity by undertaking not to identify them in transcripts of the interviews. I undertook to protect their privacy by restricting access to the recordings of interviews and classroom activities only to myself and my supervisor. I informed them of their right to end their participation at any time if they felt uncomfortable with the research proceedings.
- All participants signed an Informed Consent form in which they acknowledged that they understood their role and involvement in the data

collection and analysis procedures. They also confirmed that all pertinent ethical issues had been discussed with them.

- Letters requesting permission to film their children in the daily programme activities were given to parents and the signed informed consents of parents in this regard were collected. (Stake, 1988, p. 57)

## 5.8 CONCLUSION

The research methodology of this study is based on the Interactive Qualitative Analysis Systems Method Framework of Northcutt & McCoy (2003). The abandonment of Northcutt & McCoy's theoretical coding process and the inclusion of video recordings of classroom activities led to the collection for analysis of comprehensive and inclusive data.

The research pilot study confirmed the need to include the videotaping of classroom activities and transcriptions thereof in the data analysis process, as it brought to light inconsistencies between what the focus group participants said in the Interview Framework and their actions in the classroom.

Analysis of the individual interviews revealed each teacher's teachers' beliefs, experiences, knowledge and feelings regarding the implementation of numeracy teaching in her classroom. The transcriptions of the individual interviews were compared with the transcriptions of the recordings of what happened in each classroom. This was done in order to determine whether the teachers' practice were consistent with what they were claiming in the interviews. Paradoxes and inconsistencies were documented by quoting the teacher's stated beliefs, values, perceptions and knowledge, and then comparing these to her behaviour in the classroom, as portrayed in the transcriptions of the recordings.

Additional "silent" themes became apparent. These silent themes had not been identified during the data gathering and/or analysis of themes procedures of Northcutt & McCoy's IQA (2004). Although the focus group and the individual interview participants did not identify the "silent themes", these themes became very significant in my study. The "silent themes" emerged when I observed the teachers in practice and

noted that many did not practice what they preached. These themes were widespread and became an important aspect of my data analysis.

In the following chapter, the results of the data analysis will be interpreted.

**6.1 INTRODUCTION**

In Chapter 5, I discussed the research process. I described how I adapted the Interactive Qualitative Analysis Systems Method Framework of Northcutt & McCoy (2003) in order to give clear and comprehensive answers to my particular research questions.

The next challenge was to find ways of presenting and analysing the data collected from the interviews and tapes of classroom activities. Neuman (1997) criticises qualitative research by stating that it conduces to data analysis that is not always clear and explicit (p. 418). In order to address this challenge, I designed a Qualitative Data Analysis Flow Diagram which provided a useful framework (see Figure 6.1).

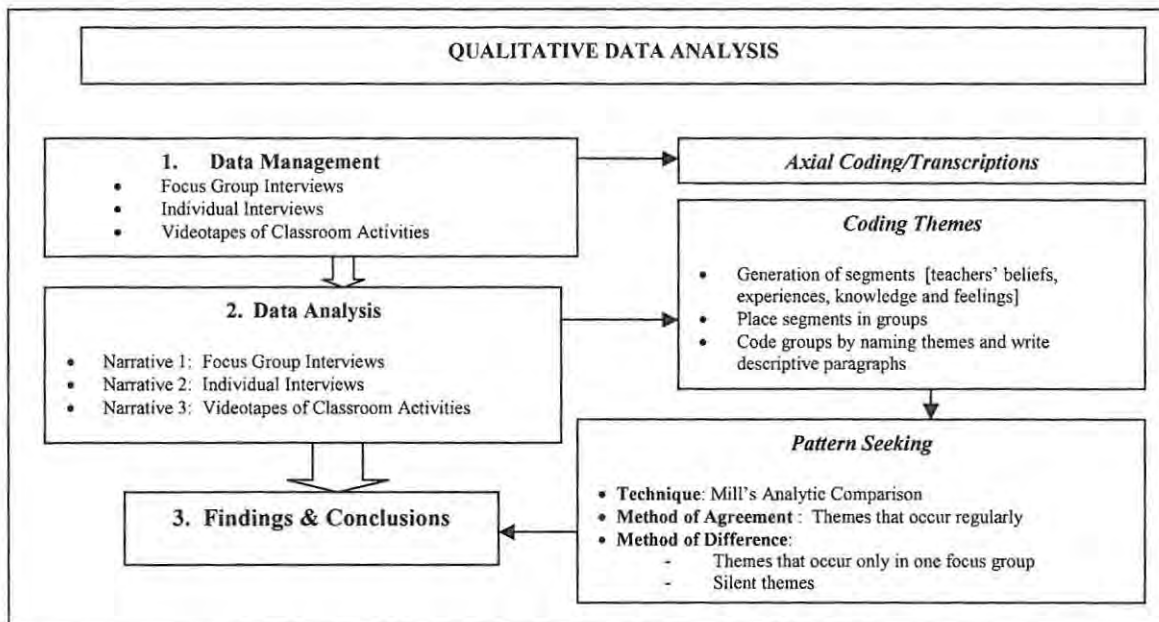


Figure 6.1: Qualitative Data Analysis Flow

My Qualitative Data Analysis Flow Diagram consists of the following three sequential steps:

- Data Management
- Data Analysis
- Findings and Conclusions.

Data management entails the transcription of focus group interviews, of individual interviews and of the recordings of classroom activities (see paragraph 5.2 in this regard). Once all this data had been transcribed and filed into electronic folders, I embarked on the next step, namely data analysis.

Data analysis consists of two procedures, namely extracting coding themes and identifying patterns. As described in paragraphs 5.4.4, the participants of the open-ended focus group interviews generated teachers' beliefs, experiences, knowledge and feelings. These were placed in themes and each theme was named and provided with a descriptive paragraph. The coded themes then informed an interview framework which was used during individual interviews. The participants were invited to share their

beliefs, experiences, knowledge and feelings regarding the coded themes, and if a participant wanted to add to those coded themes in the interview framework, this was encouraged.

In analysing the data, I made use of John Stuart Mill's Analytic Comparison as a technique to identify patterns amongst the themes (Neuman, 1997, p. 428). Mill's Analytic Comparison consists of a "Method of Agreement" and a "Method of Difference" (Neuman, 1997, p. 428).

Up to this point, the emphasis in the data analysis had rested "analysing events, and using models to present what is found in the data" (Neuman, 1997, p. 435). When I used the Method of Difference and compared the data transcriptions of the interviews with the data transcriptions of the tapes of classroom activities, I found "things that are *not* in the data" (Neuman, 1997, p. 435). Neuman (1997) terms this missing data "Negative Evidence", but I prefer the term "silent themes" (p. 435).

A silent theme is a theme that was not identified during the individual interview analysis, but came to the fore when I analysed the transcriptions of the video recordings of classroom activities. The latter transcriptions revealed that the conduct of some teachers did not correspond with what they had said about their beliefs, experiences, knowledge and feelings in the group and individual interviews. Although the silent themes seem at first glance to be "Negative Evidence" (Neuman, 1997), I prefer to see them from a constructive point of view as useful indicators of what skills teachers lack and need further training for (p. 435).

It was important that I managed the data which I had collected effectively before I could be in a position to conduct data analysis.

## 6.2 Data Management

By employing an interpretative/subjectivist research style (McMillan & Schumacher, 2001) I tried to make “sense of the data in terms of the participants’ definitions of the situation, noting patterns, themes, categories and regularities” (p. 461). I decided to manage the data by transcribing the three unstructured open-ended focus group interviews and the nine semi-structured individual interviews, as well as the nine recordings of Grade R daily programme activities. This step included the transcription of coding and the writing of descriptive paragraphs on themes by the participants, as discussed in paragraph 5.3.2.

Transcribing the data enabled me to embark on the next step of the Qualitative Data Analysis Flow, namely Data Analysis. I used “narrative descriptions” to depict how Grade R teachers teach numeracy and what these teachers believe, experience, know and feel when they are in their classrooms. According to McMillan & Schumacher (2001) “researchers use the data to construct *narrative descriptions*, detailed narrations of people, incidents and processes” (p. 93).

## 6.3. Data Analysis

### 6.3.1 *Narrative 1 - Data Analysis of the Unstructured Open-ended Focus Group Interviews*

Data analysis of the three unstructured open-ended focus group interviews [the Pilot Group, Coastal Group A and Coastal Group B] took place when the participants generated and coded themes, and wrote descriptive paragraphs for each theme. Table 6.1 reflects the sixteen themes, their segments and descriptive paragraphs which were identified by the participants of the three focus group interviews.

**Table 6.1 Themes generated by open-ended focus group interviews**

| Open-ended Focus Group Interview: Group 1 – Pilot Research Group  |                       |   |
|---|-----------------------|---|
| Segments consisting of a brainstorming activity of teachers' beliefs, experiences , knowledge and feelings  | Theme                 | Descriptive Paragraph   |
| Language barriers; Limits, More paper work, Prevent blockage to learning, Progress, Re-inforcing, Repetition, Should not be leaving out stages e.g. abstract too soon, Workbooks = formal careful   | Barriers              | To alert educators to possible problems. To plan lesson around barriers e.g. child with language barriers learn quicker with visual aids. Repetition in stills better learning, especially for learners with a second language. There is a lot of paperwork which can become a barrier – instead of teaching, the teacher and learner are too involved with paperwork. It must be practical. It is important to understand concrete concepts before moving on to abstract concepts.   |
| Change to build relations, Children enjoy it, Confused, Correct atmosphere – relaxed – important, Eager, Encouraging, Enjoyment , Enlightening, Excited , Important to develop as person and future citizen, It's fun, Noisy, Open to learning, Positive, Atmosphere positive, Positive interaction, Positive self esteem, Positive participation, Understanding, Use creative thinking   | Classroom Atmosphere  | Set the stage for positive learning. A positive atmosphere encourages learning. Then learners will feel free to experience with numeracy. If teachers is A word of encouragement leads to better learning. A lot of experimentation and patience: do not shout when a child does not understand. If a teacher is feeling negative towards numeracy activities, learners will pick it up and will not enjoy numeracy activities.   |
| Back to front numbers, Colours – different by putting together the matching objects and count them, Counting, Counting games, Counting objects, counting practical, Counting songs, Dramatising rhymes, Games , Geostats , How many months in the year – the learners must use their fingers to name one by one, Puzzles, Rhymes, Solve problems by themselves, Sorting, Threading beads, Using learners themselves by counting how many in their small groups, Using months in a year by naming them   | Classroom Activities  | Do not do activity as activity but it should stimulate learners' interest. Activities should go with the theme/topic you are dealing with. All work and no play makes John a dull boy. Teachers should ensure that activities cover all areas of development, e.g. physical, social, mentally. Learners should be involved in all activities as individuals, pairs or in groups. Learners must be motivated and stimulated by the classroom activities. Through activities the teacher will be able to identify special needs. Concepts should be concrete and based on Learning Outcomes and Assessment Standards. |
| Colours, Concepts, Concrete, Concrete experience, Comparisons, Cups different sizes, Days of the week, Few, Figures, Less, Many, Measurement, More/less, More, Numbers, Number concept, Quantity, Seriation, Shapes, Shapes and sizes, Sizes  | Concepts              | no descriptive paragraph was given  |
| Feel – they love route learning, It important for learners, Involvement, Learners must think for themselves, Learner participation, Need to prepare them, Numeracy involves the learner more than the educator, Problem solving, Thinking, We are surrounded with numeracy  | Learners' Involvement | Teachers must be enthusiastic – otherwise learners will pick it up and also be negative. Continuous assessment leads to learner progression. The educator should recognize learners' prior knowledge. The teacher as facilitator will insure their positive involvement. They learn best when they use their senses. Encourage learners to think from themselves. Learners learn better when they participate in small group activities. Let learners explore on their own – problem solving.   |
| Also to make your own resources, Good preparation, How to learners, Incidental reading/doing numeracy, Learned about resources and how to use it, Must plan activities, Time of day when numeracy activities are presented is important present activities to   | Planning              | Definition: The preparation to present the lesson. Good planning ensures optimal learning. I plan what I want my learners to achieve. Good planning involves relevant resources. The time of day is important as mental work should take place earlier than later in the day – one needs to plan for this.  |
| I asked a lot of questions as I was afraid of how I am going to deliver to a child, I believe it will lead the young ones to greener pasture, I feel that it was really important to teach learners to count using days of the week, I feel that the learners are learning best by doing it practical, Some learn it through rhymes, I felt miserable at my first workshop, I involve myself in activities with other grade R educators to gain insight, I never figure out how I am going to implement it then, I then solve some problems with mathematical skills, Learned new ideas, See wider picture, Think my learners have a numeracy background and unaware, Workshops were always interested and fun. | Teacher's attitude    | Positive attitude towards Numeracy encourages learners to be actively involved in activities. Workshops learn new ideas for the development of the children. The teacher must make activities fun for the learners to do. The teacher must be positive to change (I never figure, I felt miserable). Get a lot of clarity at the workshops, things we didn't understand. Prior knowledge and knowing the child's background and his potential. Interaction with other Grade R educators brings a lot of change because it enlightens the teachers.  |

**Open-ended Focus Group Interview: Group 2 – Coastal Group A**

| Segments consisting of a brainstorming activity of teachers' beliefs, experiences, knowledge and feelings  | Theme                                | Descriptive Paragraph  |
|--|--------------------------------------|--|
| Colours, Doubling, Constructing, Numbers [3x], Counting [5x], Sequencing [2x], Shapes [2x], Data handling, Mathematics, Mass [2x], Concrete Apparatus, Patterns [2x], Estimation [2x], Halving, Sorting, More, less, equal, Balancing, Measurement [2x], Collecting, Foundation for later abstract thoughts and visualizing, Think and reason                              | Content                              | Numeracy includes the acts of identifying, constructing, building and reproducing of Colours, Doubling, Constructing, Numbers, Counting, Sequencing, Shapes, Data handling, Mathematics, Mass, Concrete Apparatus, Patterns, Estimation, Halving, Sorting, More, less, equal, Balancing, Measurement, Collecting, Foundation for later abstract thoughts and visualizing, Think and reason by the Grade R learner in concrete form, in order to lay a numeracy foundation for later abstract thinking and reasoning.   |
| Rhymes [2x], Creative Activities [2x], Shopping, Poems, Beads, Dominoes, Movement, Integration, Nature table / nature walks, Drawings, Songs, Games [2x], Blocks, Puzzles, Numbers in everyday living,   | Enrichment and remedial activities   | Enrichment and/or remedial activities could include: Rhymes, Creative Activities, Shopping, Poems, Beads, Dominoes, Movement, Integration, Nature table / nature walks, Drawings, Songs, Games, Blocks, Puzzles, Numbers in everyday living. In order to ensure that learners are internalizing concretely numeracy concepts and experience it as everyday life's activities.  |
| Looking for more stimulation, Sometimes scared, thus unsure about content or methodology of INSET workshop, Not limited, previous numeracy inset was suited for underprivileged only, Very basic! Need to know more about numeracy, Waste of time, Motivated, Vague, Sometimes excited, To be open in mind, Not alone, Worth it, Relevant, Very keen to attend, Beneficial | Perceptions and experiences of INSET | Perceptions and experiences of INSET include looking for more stimulation; Sometimes scared, thus unsure about content or methodology of INSET workshop, Not limited, previous numeracy inset was suited for underprivileged only; Very basic! Need to know more about numeracy; Waste of time; Motivated; Vague; Sometimes excited; To be open in mind; Not alone; Worth it; Relevant; Very keen to attend; Beneficial. Thus it is being experienced positively and negatively. Teachers want to attend INSET because of being motivated to improve their teaching strategies and to know more as well as to share and learn [with other words to collegiate with one another]  |
| Happy [2x], Encouraged, Comfortable, Laughter, Life, Confident, Fun [2x], Look! Sharing, Language barriers, Excitement, Excited [2x], Understanding, Challenged, Insecure and no prior knowledge = challenged, Helpful   | Feelings                             | Feelings that are experienced by teachers and learners are happy, encouraged, comfortable, laughter, life, confident, fun, look, sharing, language barriers, excitement, understanding, challenges, insecurity and no prior knowledge, helpful and enjoyment. It is important that learners are challenged for learning to take place even though the learner might feel insecure due to no prior numeracy knowledge. Therefore, to have a learner who is confidently engaging with numeracy activities, the role of the teacher is to be understanding, helpful, exciting to address the learners' language and numeracy barriers are vital. The teacher needs to assure that her presentation of numeracy activities are inviting, exciting, Her role is to guide, support and to encourage. |

### Open-ended Focus Group Interview: Group 3 – Coastal Group B

| Segments consisting of a brainstorming activity of teachers' beliefs, experiences, knowledge and feelings  | Theme                        | Descriptive Paragraph   |
|--|------------------------------|---|
| Days of the week [3x], Morning ring [2x], Calendar, Months of the year, Seasons of the year [3x], Movement, Weather, During snack-time [2x], Register[2x], Creative Activities [2x], Music ring [2x], We always use counting songs, Birthday, Sandpit, Maths, Story time,  | <b>Daily Programme</b>       | The Daily Programme is to guide teachers and learners in presenting activities which are integrated. The Daily Programme is a framework which gives learners security as well as let them practical experiences time movement – they know what to expect during each activity of the daily programme. The Daily Programme assists teachers in their preparation and planning for each of the sections of the daily programme and the accompanying assessment. The Daily Programme is creating a balance between teacher en learner directed activities  |
| Working as a team/group, Difficult to count backwards, I think it is good for learners, Some learners are not confident – they need help and support - but others are, Active Involvement, Communication, Take turns [3x], Enjoyment, Sharing [2x], Learners are helping each other in terms of counting and drawing the number of objects needed, Ideas, Collection   | <b>Learners' Involvement</b> | Learner Involvement means that learners are actively involved and communicating ideas, feelings and experiences. Learners' involvement can show you Learners with Barriers to Learning e.g. Numeracy – use resources but count orally but cannot demonstrating counting “2s” with counters. Learner involvement is also about sharing resources and ideas in a group situation as well as peer-learning where a learner can assist another learner in grasping a numeracy concept, such as counting backwards. Thus learner involvement entails that a learner is able to work in a group but also to work sometimes independently as an individual. When learners are working in a group, the teacher is able to identify whether a learner is confident or is experiencing learning barriers in a group situation, but also when he is working alone. The crux of learner involvement means that all learning activities need to be learner-centred, and learner paced. |
| Manipulatives, Use fingers, Scale, Play dough, Using objects to count, Sequencing [2x], Bright colours, Bottle tops, In swings, Stones, Using cubes, Puzzles, I usually use learners as resources, In tyres, Straws, I use counting objects like bottle tops, counters etc.  | <b>Resources</b>             | Resources can be used to make numeracy experiences for learners more interesting. Three-dimensional resources can be used concretely in order for learners to experience and explore numeracy concepts. However, resources to grasp numeracy concepts also include the learners' own bodies, before resources such as two-dimensional puzzles and worksheets are introduced. Touching and feeling concretely is very important for numeracy development.  |
| Learners can count 1-10 orally, Weight, Days of the months, Measuring [3x], Measurement [2x], Because most of the time I use counting, Always you count, Volume [3x], Days of the week, Shapes [3x], Counting [5x], Counting is good, Colours [3x]   | <b>Learning Outcomes</b>     | The Learning Outcomes indicate what learners must achieve by demonstrating their understanding and skills based on the topic as well as the assessment standards that learners will be assessed on. The Learning Outcomes are developing the learners numeratically in order for them to be able to count, to measure etcetera. The Learning outcomes and assessment standards guide the teachers what learners must be able to achieve and therefore, guiding teachers to plan for such learning activities  |
| I need more training about numeracy, I wish more workshops to be conducted in numeracy, I need more training about numeracy, Because I will start learning numeracy, I feel that I am doing a great job, I enjoyed it because we implement through play – games, I feel very nice and learn more about numeracy, Happy because at least I gained some knowledge in as far as numeracy is concerned, I feel good because I have learnt how to implement numeracy at a grade R level, I'm feeling okay when I got a training, First time I was shy and after I will feel free. | <b>Teachers' experiences</b> | When teachers were exposed for the first time to numeracy workshops, some teachers felt shy. However, they gained a lot of knowledge and skills which made them happy and to be self-confident in implement numeracy in their classrooms. There are still numeracy gaps being experienced by teachers and therefore they need to be exposed to more hands-on numeracy workshops.  |

I made use of John Stuart Mill's Analytic Comparison as a technique to identify patterns amongst the themes. McMillan and Schumacher (2001) define a pattern as "a relationship among categories" (p. 476). According to Neuman (1997), Analytic Comparison consists of a "Method of Agreement" (in terms of which I looked at which themes were common and occurred regularly across the interviews) and a "Method of Difference" (I looked at themes that were not common, but occurred in a specific focus group interview) (p. 428).

The first pattern to emerge from the analysis of the sixteen themes was that some themes shared complementary content and/or segments (flash cards), but had different headings. Therefore I decided to cluster the themes which shared similar and/or complementary content (Method of Agreement) into three categories, namely

- *Barriers*
- *Classroom activities* and
- *Teachers' experiences.*

For example, the category of *Barriers* consisted of the themes "Barriers" as identified by Group 1 and "Enrichment and remedial activities" as identified by Group 2. See Table 6.2 in this regard.

Table 6.2 Themes that were identified by the open-ended focus group interviews are placed under three categories. [The different colours depict the different categories and their corresponding themes]

| Open-ended Focus Group Interview | Themes                                   | CATEGORY  |
|----------------------------------|--|---|
| Group 1 – Pilot Research Group   | 1. Barriers                              | Barriers / Enrichment and remedial activities = <b>BARRIERS</b>   |
|                                  | 2. Classroom Atmosphere                  |   |
|                                  | 3. Classroom Activities                  |   |
|                                  | 4. Concepts                              |   |
|                                  | 5. Learners' Involvement                 |   |
|                                  | 6. Planning                              |   |
|                                  | 7. Teacher's attitude                    |   |
| Group 2 – Coastal Group A        | 8. Content                               | Classroom Activities / Classroom Atmosphere / Content / Concepts / Daily Programme / Planning / Resources / Learning Outcomes = <b>CLASSROOM ACTIVITIES</b> |
|                                  | 9. Enrichment and remedial activities    |   |
|                                  | 10. Perceptions and experiences of INSET |   |
|                                  | 11. Feelings                             |   |
| Group 3 – Coastal Group B        | 12. Daily Programme                      | Teachers' experiences / Teachers' Attitudes / Feelings / Learners' Involvement = <b>TEACHERS' EXPERIENCES</b>   |
|                                  | 13. Learners' Involvement                |   |
|                                  | 14. Resources                            |   |
|                                  | 15. Learning Outcome                     |   |
|                                  | 16. Teachers' experiences                |   |

By making use of the Method of Difference as a technique, I looked for themes that occurred *only* in a specific focus group interview. A second pattern emerged whereby no focus group identified a theme which was not shared by the other two groups. This pattern echoed the first pattern, namely that all the themes identified appeared generically in all three focus group interviews (see Table 6.2, above).

Emerging from the three open-ended focus group interviews were three interview frameworks that were used during the semi-structured individual interviews with seven Grade R practitioners and two Grade R teachers. Once I had completed the data analysis of the focus group interviews, my next step was to analyse the data of the individual interviews, based on the themes identified in the interview frameworks.

### 6.3.2 Narrative 2 - Data Analysis of the Semi-structured Individual Interviews

In analysing the semi-structured individual interviews, the aim was to establish patterns. I analysed the transcription of each participant's individual interview and tried to establish:

- whether the participant agreed with the themes of the interview framework (Method of Agreement);
- whether the participant disagreed with the themes of the interview framework (Method of Difference);
- whether the participant identified, added to or amended the themes of the interview framework (Method of Difference).

Analysis of the individual interviews revealed each teacher's beliefs, experiences, knowledge and feelings regarding the teaching of numeracy in her classroom. For example, the transcripts of the pilot semi-structured individual interviews with participants 1, 2 and 3 revealed that the participants agreed with the theme "Learner Involvement" as described in the interview framework, but interpreted it from their own perspective. I use the *Italic* font to quote the individual interview participants. The interview with participant 3 was conducted in Afrikaans as the participant felt more comfortable in expressing herself in her home language.

Participant 1 shared the following regarding her beliefs, experiences, knowledge and feelings of implementing the theme "Learner Involvement" in her classroom:

*When I started this class, this Grade R class, it wasn't more about learner involvement. I was involved and the learners were; it was teacher-centred, yes. But as years went past, it turned now to be learner-centred. And the teacher is just there to guide the learners.*

Participant 2 acknowledged that learner involvement in play activities enhances learning:

*Uhm, the learners learn a lot because they learn to play. They don't know that they are learning but they are learning. They like to be involved in all the activities of learning.*

Participant 3 emphasised the importance of active and physical learner involvement whilst having fun:

*Dit is baie belangrik dat die leerder betrokke is. Ek meen hy moet nie net 'n aanhoorder wees nie. Hy moet prakties betrek wees. En soos wat ons geleer het, hy leer deur sy liggaam, deur sy gevoel en sy betrokkenheid is van die bekende na die onbekende, van die maklike na die moeilike, sodat 'n mens dit soos 'n trap vat, trap vir trap. Maar die leerder moet aktief betrokke wees. Die een ding wat jy nie moet doen nie, is om vir hom 'n vrees daarvoor te laat op te bou nie. Jy moet voorkom dat 'n negatiewe assosiasie opgebou is, en as daar is, moet jy probeer om dit aanvaarbaar te maak deurdat dit 'n pret ondervinding te maak en nie deur druk te plaas nie, sodat hy vry kan voel om te eksperimenteer. sodat hy blootgestel kan word al neem hy nie deel nie.*

Upon scrutinizing the categories by using the “Method of Agreement” and “Method of Difference” (Neuman, 1997) as techniques, the following were found (0. 428):

- **Barriers**

In reflecting on the category **Barriers** I found that all nine individual participants interpreted this category to mean barriers to learning as experienced by learners. Seven participants expressed a desire for training in how to intervene and remediate when a learner experiences a barrier to learning.

Participant 9 highlighted the need for training in this regard when she said in Afrikaans:

*Ek glo nie dis voldoende nie, want baie keer dan identifiseer jy 'n probleem, maar jy weet eintlik nie wat om met daai probleem te doen nie. So as daar in-diepte kan gegaan word. Ja daar is 'n leemte met die barriers to learning.*

Two participants (Participant 3 and Participant 11) differed from the rest of the group because they felt that their training had empowered them with the necessary knowledge and skills to assist a learner who was either experiencing barriers to learning or was in need of enrichment.

Participant 3 was of the opinion that her two to three years of intensive training had equipped her to deal with learners experiencing barriers to learning in her classroom:

*Ja, ek dink so. Ek dink 'n mens is opgewasse. Wel, ek is deeglik opgelei in kindertuin, wat ons destyds kindertuin genoem het en later in pre-primer. So dit was nie net sommer 'n twee, drie maande kursus nie. Dit was deeglike twee jaar, drie jaar opleiding. Ek is twee jaar opgelei in primere opleiding en die derde jaar in kindertuin en toe nou deur Unisa pre-primêr. ... Ja, dis leerprobleme en die oorsake en die hantering daarvan, is deeglik ingewerk in die kursus.*

When I asked Participant 11 during the interview whether she felt comfortable dealing with learners who experience barriers to learning, she answered:

*Yes, yes, yes. ... Yes, I am also a Brain-gym teacher and an Audioblox teacher. Ja, I have just gone on an integrated learning therapy course. You can actually re-pattern the brain, for children with especially ADD problems. I've got, I would say, about three children in my class that [unclear] ADD and have those ADD problems and perceptual problems and I did the ITL course to be able to help them. ... We believe that every child is gifted to a certain extent, in a certain area. It might not be in every area but in a certain area. And that is the reason why we changed our whole routine and we went on to the Open Framework Model. But I think, people think, often children with barriers to learning have only learning problems but often your gifted child can also cause a problem if they are not stimulated. So that is quite important to be, made sure you cater for everybody.*

In line with the Method of Difference (Neuman, 1997), where one has to look for what is not there in the data, I found that none of the participants raised the possibility that the teacher herself might be responsible for creating barriers to learning in her classroom (p. 428).

As a technique, the Method of Difference pointed to a new development in the analysis of the individual interview transcriptions. A theme which was not identified by the unstructured focus group interview participants in the interview framework emerged during the analysis of the transcription of Participant 8. McMillan & Schumacher (2001) term this new development as “an *emergent design*” and explain that it “*emerges as data [is] collected*” (p. 15). According to McMillan & Schumacher (2001) the role of an emergent design is to “give an understanding of one specific practice with its contextual influences, process variations, and life histories” (p. 539). In this research study, I called the added

theme an “emergent theme”. Therefore I had to amend Table 6.2 to reflect this new theme and its origin. See Table 6.3 in this regard. .

**Table 6.3 Table of Themes that were identified during the Semi-structured Individual Interviews being placed under three Categories. [The different colours depict the different categories and their corresponding themes]**

| Semi-Structured Individual Interviews   | Themes   | CATEGORY  |
|---|--|---|
| <b>Group 1 – Pilot Research Group</b><br>• Participant 1<br>• Participant 2<br>• Participant 3                  | 1. Barriers<br>2. Classroom Atmosphere<br>3. Classroom Activities<br>4. Concepts<br>5. Learners' Involvement<br>6. Planning<br>7. Teacher's attitude | <b>Barriers / Enrichment and remedial activities /Discipline problems = BARRIERS</b>  |
| <b>Group 2 – Coastal Group A</b><br>• Participant 8*<br>• Participant 9<br>• Participant 10<br>• Participant 11 | 8. Content<br>9. Enrichment and remedial activities<br>10. Perceptions and experiences of INSET<br>11. Feelings<br>12. Discipline problems*          | Classroom Activities /Classroom Atmosphere /Content /Concepts /Daily Programme /Planning /Resources/Learning Outcomes = <b>CLASSROOM ACTIVITIES</b> |
| <b>Group 3 – Coastal Group B</b><br>• Participant 14<br>• Participant 15  | 13. Daily Programme<br>14. Learners' Involvement<br>15. Resources<br>16. Learning Outcome<br>17. Teachers' experiences                               | Teachers' experiences/ Teachers' Attitudes/ Feelings /Learners' Involvement = <b>TEACHERS' EXPERIENCES</b>  |

\* Discipline problems – new emerging theme added by Participant 8

The emergent theme that Participant 8 added to the interview framework was "Discipline", which I placed in the category *Barriers* (this interview was conducted in Afrikaans as the participant felt more comfortable participating in her mother tongue):

*Hulle eie ding wil doen, en jy kan maar net sê wat jy wil, hulle luister nie. Want daar's 'n hele paar kinders wat baie woelig is... Die kind se maniere, hy is baie aggressief. Hulle kan nie reg*

*daarmee speel nie, ek is te bang, ek kry nuwe speelgoed. Sommer die eerste maal as dit uitkom, dan storm hulle en breek alles. Baie vernielsugtig. Ek het in die begin baie puzzles, goete gekoop om hulle aktief besig te hou, maar hulle word baie verniel. Ja, ja, ek kan nie my rug draai nie. As hulle miskien so vyf in 'n groep is, maar as hulle so groot is, 'n groot frustrasie! Daarom dat ek daai maand wat ek siek was, het ek sommer twee dae by die huis gebly.*

To summarize, the category **Barriers** depicted the following directives:

- All nine individual participants interpreted this category as referring to barriers experienced by learners;
  - None of the participants raised the possibility that the teacher herself might be responsible for erecting barriers to learning in her classroom;
  - Only seven participants expressed a need for training with regard to how to intervene or remediate when a learner experienced a barrier to learning;
  - An emergent theme, “Discipline”, was added to the existing themes and categories.
- **Classroom activities**

As reflected in above Table 6.3, the category of “Classroom Activities” came into existence when the themes “Classroom Activities”, “Classroom Atmosphere”, “Content”, “Concepts”, “Daily Programme”, “Planning”, “Resources” and “Learning Outcomes” were clustered together.

In analysing the transcripts of the nine individual interview participants regarding this category, I made again use of the Method of Agreement as a technique and discovered that all the participants experienced frustrations with the theme of “Planning” and would like it to be more clear and simple.

When I used the Method of Difference to identify patterns, it indicated that seven individual interviewees requested training regarding mathematical *concepts* and

how to teach those, whilst two interviewees did not. Participants 3 and 11 differed from the rest of the interviewees in that they felt they had enough training to introduce mathematical concepts in a hands-on way in their classrooms.

Participant 3 explained that she worked mathematical concepts into every component of the daily programme:

*Ja, dit word in elke faset van die dagprogram ingewerk. As hulle musiek doen, as 'n mens storietyd het kan 'n mens vrae vra om hulle te lei om die probleem op te los. Dan die opvoedkundige speletjies wat hulle speel, party daarvan kan hulle help om probleme op te los. Of ek sal partykeer doelbewus 'n probleem skets, en dan vir hulle sê hoe sal jy dit oorkom? Ek lei en lok hulle tot denke, soos ons nou die quiet play het, want dis basies opvoedkundige speletjies wat ons het, en een is altyd numeracy. Die een is manipulerend, waar hulle ryg of pennetjebord, of probleem oplossing. Jou speelyd, wanneer jy wiskunde doen liewers in die oggend wees as die kinders nog varser is. Dis die verskillende konsepte wat jy wil bereik, dat hulle 'n konsep het van, soos getalsbegrip. Jy sien, in die oggend het ons gepraat van daai, toe ons begin het, watter dag is dit, watter seisoen is dit, en ons doen elke dag jy weet, watter soort weer is dit, wat is die datum en wat is die dag en watter tyd is dit. As die son opkom is dit in die oggend en as die son ondergaan is dit in die aand Maar dit wys jou jy kan numeracy orals inwerk, selfs al doen jy net tyd, voor, na tipe ding is dit as jy met wiskunde werk.*

Participant 11 emphasised that her training assisted her in thinking more broadly about how to introduce numeracy concepts in a learner-centred fashion.

*You know, I think, because of the training I've had. I have attended courses. And we have got the knowledge, the prior knowledge, to be able to do so. With the result that I have changed my approach and we have changed the themes of the past. So now what we have done, we have actually taken the children and we said, what is interesting them? And they become more Units of Inquiry, more than just themes. A lot of discovery and a lot of children are using our Show and Tell, where they are bringing things from home to do with the theme, so that the children can see it as a whole. And the first thing that they do is, they do puzzles or games and they know it is a non-negotiable, and also the child is fresher in the morning. He is more likely to complete a puzzle. He then goes to the activities, where three are compulsory and he can manage his time there, as much time he wants to spend there with each one and only once he has completed the compulsory activities, he is allowed to go into free play. Once they have finished their creative activities, they've got to do a maths game. They can choose whatever maths game. And it is exactly the same with all my activities. Everybody gets the same raw materials but it is up to them to choose and make what they want to make. That is creativity. They do a lot of mass in the sandpit. Also they had to estimate where was more and where was less in the story, how many do you estimate, how many ladybirds were there.*

The Method of Difference also indicated that Participant 2 was the only participant to amend a theme in the interview framework, namely "Learner Involvement". Although Participant 2 agreed with her peers that all activities needed to be learner-centred, learner-paced and learner-based, when the theme "learner involvement" was discussed, she admitted that she did not allow much of it in her classroom:

*Yes, I, most of the time, I plan the activities because they don't know from A to B. So I have to plan for it, so I can see their weaknesses and strengths. And I feel that I have to control them. Yes, so that they know they are here to learn.*

In summary, the category *Classroom Activities* depicted the following directives:

- All the individual interviewees voiced their frustration with the theme “Planning”;
- Seven individual interviewees requested training regarding mathematical “concepts” and how to teach them, whilst two interviewees did not share this need;
- One interviewee acknowledged that she was not implementing what the focus group participants were preaching regarding being learner-centred, learner-paced and learner-based.

- ***Teachers' experiences***

The category “Teachers' experiences” included the themes “Teachers' experiences”, “Teachers' attitudes” “Perceptions and experiences of INSET”, “Feelings” and “Learners' involvement” (see Table 6.3, above).

Analysis of the nine individual interview transcripts revealed positive and negative perceptions regarding the themes “Teacher's Attitude” and “Perceptions and experiences of INSET”. Positive perceptions were reported by seven participants (Participants 1, 2, 8, 9, 10, 14 and 15), whilst Participants 3 and 11 had negative experiences regarding the in-service training of Grade R teachers.

Participant 3 expressed her frustration both with lesson planning, which was time-consuming, as well as with the in-service training which focussed on the new curriculum (NCS):

*Negatief. Maar ek hou nie van hierdie wat jy so breedvoerig moet uitskryf nie, daarby, ek voel 'n mens kan dit korter uitskryf. Ja, en ek moet sê, elke keer as 'n mens by so 'n kursus is, is almal negatief daarvoor hoor. So daar was baie negatiewiteit. Ons het altyd gesê hulle mors baie tyd, want kort-kort word daar iets aangebied maar dan word dit 'n bietjie verander met die volgende werkswinkel en dan kom hulle agter dat dit nou weer beter werk as die ander. Ja, hulle moes met daai goed reg in die begin te voorskyn gekom het, en daarvolgens kon hulle, sou dit die onderwysers baie meer gehelp het om die opleiding in die klas te sien. Dit is dag tot dag uitgewerk en jy kan dit net so aanbied. Hulle moes beter voorbereid gewees het. Niks, dit draal, dis lank uitgereg, dit voel baie keer vir my dis asof mense nou opgelei word vir die eerste keer, asof hulle nie agtergrond het nie.*

Participant 11 was of the opinion that the NCS training was a waste of time for teachers who had had a formal education:

*You know, I think, because of the training I've had, and because of the training I personally am responsible. You know, so, a lot I think, to me a lot of these, are a waste of time, personally. I also do feel that a lot of the training should be more hands-on. You know, at the moment, we actually need to say right, if you've got a teacher who is good at that, go and spend a day with her. And that, personally I find that I need to know what is another school doing. Not just pen and paper. And for the people who have been formally trained, I believe, they don't need it. I do believe, that we are actually not into the nitty gritty, it is very superficial. They do planning, but to put that actual planning into practice. There, they don't see that they connect and I went to a workshop at one of the schools, where they had all these outcomes and assessment standards, all over the walls, but I never saw it in practice. . Coming back to in-service, I*

*think the teachers, in a nutshell, need to put in practice what they've learnt. That's where there is a little bit of a gap.*

The data analysis of the transcriptions of the individual interviews revealed that teachers feel a need for training in the implementation of numeracy teaching in Grade R. Seven participants expressed the need to be trained in:

- how to implement numeracy assessment standards and hands-on activities
- how to enhance learners' problem-solving and thinking skills with numeracy activities.

The following participants expressed a need for training in numeracy teaching and frustration regarding their attempts to introduce numeracy concepts:

Participant 2 expressed her need for guidance as a wish:

*No, not yet, I am not comfortable about some of them. That's why I would like sometimes, if I did my lesson plans, somebody to come to assess it. Because sometimes you feel, maybe I forced this assessment standards and I am not sure if this assessment standards are really showing the activity. Yes, there are some that are clear to say, maybe provide a variety of material for the children to do whatever. You can see it is clear this one, they paste and choose what to do, this one. But there are some that ... Yes, I wish someday, one day to get someone to tell me maybe the activity for this one, this is the activity. Yes.*

Participant 9 wanted assistance with the implementation of problem-solving (This interview was conducted in Afrikaans as the participant felt more comfortable in participating in her mother tongue.):

*Ek sal meer leiding moet kan kry in dit, probleem-oplossing.*

Participant 10 was unfamiliar with the teaching of problem solving:

*I think it is, yeah, I don't know whether, you mean to give them an opportunity to think and reason? I mean, I could do, I wouldn't have a problem doing it. I just need....*

Participant 14 expressed her confusion when trying to make sense of the assessment standards:

*Because sometimes, you know, at the training, you are told at the training, but when it comes to the assessment standards, 'cause now the idea was, now a Grade R child does not write, just prepare him to write. And then he is going to write when he is at Grade 1. But now the assessment standards they bound us to that, they have to write. 'Cause the assessment standard has got that writing nè? It's drawing, everything. It is now that the problem I recognized is that they must start writing also. Because of the assessment standards ...*

Participant 15 expressed a lack of self-confidence when it came to planning:

*I need guidance on how to do it; I can try and plan it. Because, there is this planning business. Sometimes you don't know what to do. So, sometimes, yes, I need guidance. I would like to, I don't know how to put it, but the guidance for the three-dimensional. Yes, because it is a little bit confusing, sometimes I am not sure whether I do the right thing or what is it I am doing, I need.*

The data analysis of the category “Teachers’ experiences” depicted the following directives:

- Seven participants had positive experiences of the theme “Perceptions and experiences of INSET” whilst

- Two participants felt negatively about in-service training;
- Seven participants expressed a need for training in the implementation of numeracy teaching, whilst
- Two participants felt comfortable with their knowledge and skills in teaching numeracy in their classrooms.

Summarising my interpretations of the data from the semi-structured individual interviews, the following five patterns were identified:

- Pattern 1 confirmed that the sixteen themes of the interview frameworks were experienced by nine interviewees;
- Pattern 2 saw the emergence of a new theme, which was not previously identified by the focus group participants;
- Pattern 3 identified the training needs of seven of the individual interviewees;
- Pattern 4 revealed that all nine individual interviewees expressed their frustrations regarding the theme “Planning”;
- Pattern 5 showed that two participants, namely Participant 3 and Participant 11 differed from the rest of the individual interviewees, by alleging that their formal training empowered them to cope with barriers to learning, as well as to implement numeracy activities that are hands-on, practical and likely to enhance the problem-solving and thinking skills of the Grade R learners.

On reflecting on the patterns, I started to become rather sensitive about Pattern 5, as it seemed at this stage that these two participants were on a different ECD page from the other participants. I therefore looked forward to analysing the transcriptions of the videotapes that reflected Grade R daily programme activities in order to find proof that these two teachers were practising what they preached. I was also curious to find out if the other seven participants actually experienced the frustrations in their classroom that they disclosed during their interviews with me.

### 6.3.3 Narrative 3 - Data Analysis of the Recordings of Grade R Daily Programmes

As described in paragraphs 5.4.5 and 5.4.8, I included nine video recordings of Grade R programmes in order to gain a chronological perspective on what transpired in each of the individual interview participants' classrooms when they taught numeracy. After transcribing the nine videotapes, I tried to establish whether the transcriptions:

- Indicate the presence of the themes of the interview framework in the daily programme implementation (Method of Agreement);
- Indicate the absence of the themes of the interview framework in the daily programme implementation (Method of Difference);
- Or whether a participant identified, added or amended the themes of the interview framework (Method of Difference).

By making use of Mill's Analytic Comparison I looked at the three categories and found the following:

- ***Barriers***

All nine videotape transcriptions revealed that the teachers did attempt to address barriers to learning when these occurred in the classroom. For example, Participants 2 and 3 switched to the learners' home language when a learner did not understand an instruction or concept, whilst Participant 4 made use of questions to direct learners to verbalise what they were going to model.

When the teacher realised that the dough activity was not kicking off, she sat at the table and posed questions to learners, inviting them to tell her about the animal they were making.

Participant 10 demonstrated with apparatus:

When a learner battled, the teacher took the apparatus and demonstrated to the learner how to come to the answer [story sums].

Participant 11 not only gave support to learners building puzzles with the aid of an assistant, but she also guided learners on how to focus when solving problems:

The teacher invited a learner to tell her about the story. However, the learners needed guidance and the teacher let them focus on how many counters were on the eyes [2] and then to focus on how many counters were on the carpet [8]. She then guided the learners to the answer that  $2 + 8$  equal to 10.

The Method of Difference indicated that Participant 8 was the only participant who experienced “Discipline Problems” in her classroom:

One learner discovered a toy piano and started playing on the floor with it. Other learners found a ball and started kicking it in the class-room and some climbed on the shelves.

The data analysis of the category “*Barriers*” depicted the following directives:

- All nine participants addressed barriers in their classrooms;
- One participant [Participant 8] experienced discipline problems in her classroom.

- ***Classroom activities***

In analysing the transcripts of the nine videotapes, I used the Method of Agreement as a technique and discovered that all the participants followed a “Daily Programme” and presented “Classroom Activities” similar to Participant 9’s, namely:

The Daily Programme consisted of a Discussion Ring, Numeracy Ring, Creative Activities, Movement/Music Activities and a Story Ring.

I found that the theme “Content” focussed mostly on numeracy “concepts”, in the sense that all nine Grade R teachers placed considerable emphasis on counting activities. Apart from counting, Participant 1 focused also on teaching learners to model a number 3. Participant 2 exposed learners to numeracy concepts and activities such as counting, matching, making patterns with shapes, naming opposites as well as experiencing the concept of time through reciting the days of the week and names of months. Participant 3 explained the time concept practically to learners:

The teacher exposed learners to time as a concept throughout the day. She used the alarm clock and pointed out to learners when an activity was going to begin or end i.e. they will be back when the long hand is at the 7. Above activity was repeated when the learners were busy with creative activities and she warned them that in 5 minutes they were going to tidy up, when the long hand had moved from the 4 to the 5.

Participants 8, 9 and 10 emphasised matching and grouping as numeracy concept activities, whilst Participant 11 included doubling and halving activities in her numeracy content. Both Participants 14 and 15 focussed on measurement as a numeracy concept but Participant 14 included position in space, i.e. on top of, behind, over, under, forwards and backwards, whilst Participant 15 exposed learners to directionality, especially left and right as concepts.

The Method of Difference indicated that the “Classroom Atmosphere” in eight of the nine classes was warm, relaxed, happy and respectful. Learners were comfortable with the routine of the Daily Programme and knew what was expected of them. The atmosphere in Participant 8’s classroom can charitably be described as *laissez-faire*:

Atmosphere was chaotic with the teacher trying to teach and learners walking up and down the classroom. Learners were bored; some listened to the teacher, whilst others walked around the room, teased and wrestled with one another. Although the learners were instructed to complete the worksheets, some learners preferred to play and took off the bear from the cupboard. One girl was sweeping the floor, in order not to participate in the activities. The classroom was disorganised and had a space problem. The pictures and posters on the walls were folded. Files and boxes were stored on the racks instead of being put nicely away in a cupboard. Numeracy posters such as a birthday chart, a dilapidated weekly weather chart of the previous week [not completed for Thursday and Friday], an opposites chart and a calendar were placed on the walls. The untidy teacher’s table took up space in the classroom. The shelves were stocked with untidy equipment such as tins with dirty paintbrushes, pieces of paper etc.

According to the Method of Difference, the theme “Planning” had varied responses. Although planning was evident in the numeracy activities of all classes, it was conducted haphazardly in the classrooms of Participants 1, 8, 10, 14 and 15, as these teachers jumped from one numeracy activity to another without ensuring that the numeracy concepts had been consolidated before moving on. The transcriptions of the audiovisual recordings of the classroom activities of Participants 3, 9 and 11 indicated careful planning. Participant 11’s planning can be summarised as follows:

The variety of classroom activities, as well as the home-made maths equipment, testify to careful planning and preparation.

Although "Learning Outcomes" was identified as a theme by the participants of an open-ended Focus Group, I was not able to derive from the transcripts of the videotapes which "Learning Outcomes" were achieved as the teachers did not provide their Lesson Plans for me to observe.

With the exception of one class, all Grade R classes had adequate resources for learning through play. Participant 8 acknowledged that she did not provide the learners with adequate resources as the educational toys and equipment were broken:

*Ja, dit breek. Hulle kan nie reg daarmee speel nie, ek is te bang, ek kry nuwe speelgoed, wat gaan hulle met dit. Sommer die eerste maal as dit uitkom, ... Baie vernielsugtig. Ek het in die begin baie puzzles, goete gekoop om hulle aktief besig te hou, maar...*

Only three schools (Participants 3, 10 and 11) had a variety of outdoor play resources in a good and safe condition. The outdoor play area of the other six schools varied from poor (Participants 2, 8 and 9) to non-existent (Participants 1, 13, 14).

The data analysis of the category *Classroom activities* depicted the following directives:

- All nine participants followed a daily programme;
- All nine participants made provision for numeracy concepts;

- Eight participants had happy, relaxed and respectful atmospheres in their classrooms whilst
- One participant presided over a laissez-faire classroom;
- Only four participants [Participants 2, 3, 9 and 11] planned their classroom environment and activities effectively.
- Resources were available in eight of the nine classrooms whilst
- Outdoor-play equipment was non-existent at three schools [Participants 1, 14 and 15).

- ***Teachers' Experiences***

The transcriptions of the videotapes gave only evidence for the themes “Learner’s Involvement” and “Teacher’s Attitude”. No observations regarding the themes “Feelings” and “Teachers’ Experiences of In-service Training” were evident.

The Method of Difference indicated that the involvement of learners in the numeracy learning activities varied. In seven classrooms, learners were instructed by their teacher to engage in a specific learning activity. The transcriptions of the videotapes of Participants 1, 2, 8, 9, 10, 14 and 15 reflected that these teachers gave learners limited scope to choose which activity they would like to engage with:

Participant 1 instructed the learners to paint the pumpkin orange during her creative activities. Like Participant 1, Participant 8 also instructed the learners regarding the use of colour crayons:

The teacher instructed the learners to colour the farm animals with a pink crayon, the wild animals with a brown crayon and the house animals black.

Participant 2 limited the free-choice opportunities for learners:

Only when the creative activities were finished, learners were allowed to choose whether they want to draw at the back of the big papers a picture, or whether they want to play with dough or play in the fantasy area.

Although Participant 9 focussed on numeracy patterns and number identification, she limited learners' participation:

The teacher repeated the clap of a pattern but this time with 5 claps. Learners volunteered to show the card but only one learner was allowed to show the number 5 card.

Participant 10 dominated the numeracy activities and provided no opportunities for self-exploration, experimentation and self-discovery:

The teacher showed a picture of a cake with candles decorated on top of it. All the younger children sat at tables and decorated their cake pictures with the assistance of a helper. No other creative activities were put out.

Participant 14 instructed the learners to get into their groups and complete the worksheet which was given to their group's table. Limited education toys being set out confused learners, some of whom started to engage with free-choice free-play activities:

Once the learners completed their worksheets, they sat on the carpet and played with a few big Lego blocks. However, as more learners gave in their worksheets, the space on the carpet as well as the quantity of blocks to be shared became limited.

The learners in the classroom of Participant 15 were engaged with the various worksheet activities during creative activities:

All the learners sat in a circle on the carpet. The teacher was sitting in front of the learners. She showed a jug with water and requested a learner to pour water with the jug into a small bucket. The learner did it, filling the jug 5 times. Whilst the learner was pouring the water into the small bucket, the other learners were looking at the actions in complete silence.

Participants 3 and 11 differed from their peers by setting up their classrooms in such a way that it invited spontaneous exploration and discovery activities. A science discovery corner in the classroom of Participant 3 led to a problem-solving situation by a learner:

At this table, the learners spontaneously experimented whether certain leaves or seed can float or sink. They discovered that leaves have veins when they looked through a magnifying glass. The teacher encouraged learners to be involved with experimentation. A learner experienced a problem, but through self-discovery rectified it: at first she took the magnifying glass and then put leaves on top of it. She realised something was wrong and through experimentation, she came to the conclusion that she needed to put the leaves under the magnifying glass and used a little bit of distance to see

the total picture of the leaves having veins. The teacher guided learners through questions to look at the veins of the leaves.

Participant 11 emphasised that learners were to make their own choices. The following creative activities, as depicted in the video recording of the classroom activities of Participant 11, reflected that learners were given ample opportunities to exercise choice as to where and what they were going to be involved with:

Learners were busy with creative activities. They chose freely to be engaged at any table. Some learners were building puzzles, with the teacher and an assistant assisting and guiding them in completing their puzzles. After the learners have painted they placed their paintings on a dry rack. Some learners refined their fine motor skills as well as enhancing their own individual creativity with the collage activities. At another table learners were moulding dough with various materials to create a final product. Some learners enjoyed exploring and building with the screws and bolts. Learners rotated amongst the various creative art tables freely. At one table, a learner was completing a worksheet. The teacher assisted the learner in having the correct grip on the crayon. One learner worked on her mind-map about the theme Spring. Learners engaged with numeracy games once they finished their creative art activities. One learner built his own diamond pattern with patterned blocks.

Regarding the theme “Teacher’s Attitude”, the Method of Agreement indicates that all the teachers were committed to their role as teachers. All the videotape transcripts reflected teachers engaging in teaching activities. Although Participant 8 experienced disruptive behaviour in her classroom, she still continued reading and telling a story:

Despite the teacher reading/telling the story, learners were making a lot of noise. Some learners walked around in the classroom whilst one learner swept the floor. One boy was sitting next to the teacher, drinking from his water bottle, ignoring the teacher and her story. Only a few learners were listening to her.

- The data analysis of the category *Teachers' Experiences* depicted the following directives:
  - Limited opportunities for learners to be involved in free-choice activities were observed in seven classrooms [Participants 1, 2, 8, 9, 10, 14 and 15]; Two classrooms were set up in such a way that all learners were involved in activities of their own free choice [Participants 3 and 11];
  - All nine teachers were committed to fulfilling their role as a teacher.

In summary, the data interpretation of the transcripts of the audiovisual recordings identified the following patterns:

- Pattern 6 confirmed that nine participants:
  - addressed barriers in their classrooms;
  - followed a daily programme;
  - made provision for numeracy concepts;
  - were committed to fulfil their role as a teacher.
- Pattern 7 showed that not all participants shared similar experiences regarding resources, classroom atmospheres and planning:
  - Eight of the nine classrooms had adequate resources;
  - Outdoor-play equipment was non-existent at three schools [Participants 1, 14 and 15];
  - Eight participants had happy, relaxed and respectful atmospheres in their classrooms;
  - One participant [Participant 8] experienced discipline problems in her laissez-faire classroom;
  - Only four participants [Participants 2, 3, 9 and 11] planned their classroom environment and activities effectively;

- Seven participants provided limited opportunities for learners to be involved with free-choice activities in their classrooms [Participants 1, 2, 8, 9, 10, 14 and 15]; whilst
- Two classrooms were set up in such a way that all learners were involved in activities of their own free choice [Participants 3 and 11].

#### ***6.3.4 Narrative 4 – Comparison of the Data Analysis of the transcriptions of the Individual Interviews with the Data Analysis of the transcriptions of the videotapes of Classroom Activities***

With the completion of the data analysis of the transcriptions of the videotapes of classroom activities, I was in a position to find out whether the participants were practising what they preached. I used Mill's Analytic Comparison to compare the data transcriptions of the interviews with the data transcriptions of the classroom videotapes.

The Method of Agreement revealed that the three categories (Barriers, Classroom Activities and Teachers' Experiences with their themes) were present in the classroom. See Table 6.3 in this regard.

- ***Barriers***

As stated in paragraph 6.3.2 above, the category ***Barriers*** indicated that all nine individual participants experienced barriers to learning on the part of learners. The transcriptions of the audiovisual recordings confirmed, however, that teachers were not only trying to overcome these barriers (see paragraph 6.3.3, above), but were also inadvertently contributing to them, through either ignorance or default.

Participant 1 neglected to demonstrate to learners how to write the symbol 3:

The teacher informed the learners that she was going to give them each a little piece of paper on which 3 was written. She then told them they were going to write the number 3 symbol on top of the 3 on the little piece of paper. The number 3 symbol was placed incorrectly in front of the learner; it was on its side and might lead to remedial problems. In all above actions, the teacher never showed them practically how to start from the top and form the 3. Instead, she only told them to turn the m around so that it could form a 3.

Participant 2 did not correct learners when they followed her mirror image actions:

During perceptual activities, the teacher told the learners to follow her instructions. The teacher did not ensure that her own actions were correct i.e. she instructed the learners to put up their right hands and then she demonstrated it to them by putting up her right hand – the learners then put up their left hands instead of their right hands. [This is a gross remedial problem. The teacher should have shown her left arm for the learners to copy with their right arms when she stood in front of the learners and facing them.]

Although Participant 8 acknowledged during her interview that she experienced discipline problems, the videotape of her classroom activities revealed that she was contributing to it by her lack of discipline and remedial intervention:

The teacher was busy at the carpet, going through the worksheet once again. Next to her a boy was playing with a few lids on an upturned balancing board, with his backside facing the teacher. She did not reprimand or invited him to participate in the activities. She actually

ignored him. A group of learners (4) sat next to her, making their own conversations.

Participant 9 did not ensure that the number symbol was correctly placed in front of each learner in order for him/her to copy it with dough:

Although the teacher assisted from time to time, the learners were uncertain what to do at the dough table. One learner moulded the number symbols **1, 2, 3, 4, 5 & 6** but the other learners were still just rolling the dough. One learner experienced problems moulding a **2** and a **6** as the flash card was upside down and looked like a **9** to him. The teacher scolded the learners who did not mould anything. One learner who had done nothing yet, reshuffled the number cards in a sequence from **1 to 6** on top of his dough board. Remedial problems could occur because some learners sat in such a way that the number line was facing them upside down. Thus the **6** could be read as a **9**. The **3** looked like an **m**. The **5** was not correctly formed. The **2** was not correctly formed. The teacher did not give guidance to the learners who did not know what to do or how to form the number symbols.

Although Participant 10 integrated numeracy concepts with outdoor movement activities, this activity was teacher-centred as only the teacher did the counting:

The teacher demonstrated to the learners how to do scissor jumps and instructed them to do it with her, whilst she counted how many times they jumped. The learners participated but some learners experienced large motor co-ordination and mid-line crossing problems, which the teacher ignored. After the jumping the learners had to do push-ups, which she counted. A learner volunteered to demonstrate how a push-up is being done, whilst the teacher counted 10 push-ups. The teacher

and the learners participated in a game called “There’s a fire on the mountain”, where they had to walk at first and then run, and then eventually group themselves according to a number. Confusion was experienced by the learners with the “fire on the mountain” game, as they were not able to group themselves according to the number called by the teacher. This meant that the teacher had to run around organising them physically into groups.

Participant 14 did not ensure that all the learners understood that the names of months form a sequence. Therefore the counting activity became merely a rhyme.

Although Participant 15 identified that some learners were having a problem distinguishing between left and right, she did not know how to remediate it:

The teacher demonstrated to the learners how to touch their left knees with their right arms. Some learners were not able to distinguish between left and right, therefore the teacher went to each learner checking that he/she was in the correct position. When the learners experienced problems in executing the cross-over instruction, the teacher grabbed a learner, instructing her to demonstrate to the learners how to cross with her right arm to her bent-up left knee. The teacher demonstrated again the cross-over action but this time she was facing the learners, thus it looked as if she was crossing with the left arm to the right leg, whilst the learners had to do it with their right arm to the left leg. When the learners still did not understand, she grabbed another girl, as if she was a puppet, using her left arm to touch her right leg, counting rhythmically. However, when the learners were instructed to execute this action, they copied the learner and it was again wrong because they used their left arms and not their right arms.

Although Participants 3 and 11 acknowledged that they had learners experiencing barriers to learning in their classrooms, the transcriptions of the videotapes did not show learners battling with the activities prepared for that day.

In summarizing the comparison of data regarding the category *Barriers* it was found that the transcripts of the individual interviews agreed with the transcripts of the audiovisual recordings of classroom activities:

- Although all nine individual participants acknowledged that there were learners in their classrooms with barriers to learning, this was only evident in the videotapes of seven classrooms;
  - The seven videotapes of classrooms where barriers to learning occurred correlated with the transcriptions of the seven individual interview participants, who expressed a need for training regarding how to intervene or remediate when a learner experienced a barrier to learning.
- ***Classroom activities***

By comparing the transcriptions of the individual interviews with the transcriptions of the videotapes of classroom activities, the Method of Agreement confirmed that:

    - Although frustration with planning was voiced by all participants, evidence of ineffectual planning was observed in the classroom environment and activities of Participants 1, 8, 10, 14 and 15;
    - Although seven individual interviewees requested training regarding mathematical “concepts” and how to introduce them in practice, all nine participants made provision for numeracy concepts;
    - The classroom of the interviewee [Participant 2], who acknowledged that she was not implementing what the other focus group participants were

saying about the need to be learner-centred, learner-paced and learner-based, was found to be teacher-centred, teacher-paced and teacher-based.

Using The Method of Difference to compare the transcripts of the individual interviews with the transcriptions of the videotapes in terms of the category *Classroom activities*, I found a new pattern emerging. Pattern 8 indicated that several new themes, of a kind that I have characterised as “silent themes”, came to the fore.

Six “silent themes” were identified in the nine transcripts of the videotapes of classroom activities:

- ❖ Silent Theme (a): Teacher-centeredness;
- ❖ Silent Theme (b): A reluctance to go beyond the minimum requirements of the assessment standards on the part of the teacher;
- ❖ Silent Theme (c): Limited open-ended questions which appeal to learners’ creative, thinking, reasoning and problem-solving skills;
- ❖ Silent Theme (d): Absence of developmentally appropriate practices;
- ❖ Silent Theme (e): Limited opportunities for learning through play;
- ❖ Silent Theme (f): A failure to organise and manage the Grade R class to enhance numeracy skills.

Although all the focus group participants and the individual interviewees acknowledged the importance of the active involvement of learners in the daily programme, it was found that the first silent theme, namely teacher-centeredness, occurred in seven of the nine classrooms.

The daily programme activities, including the outdoor movement activities of Participant 1 were teacher-driven, teacher-centred and teacher-controlled, with no input from the learners except to participate:

The teacher put out 4 hoops and 2 rings. The teacher showed the learners how to twist with the hoops. The teacher then initiated a racing game – she explained how the game was to be played and facilitated the playing of it, whereby the learners had to run 5 metres, crawl through a hoop, run around a child and run back to group for the next child to start. The teacher initiated a game with ropes whereby some learners were handling the ropes and others had to jump. The teacher assisted in organising the children to jump and twisted one end of the rope. The teacher initiated and played actively in a ball game whereby she threw the ball to learners - they caught it and threw it back to her. The teacher initiated and facilitated the “cat & mouse” game.

Participant 2 acknowledged in her interview that she does not implement what she believes:

*And I feel that I have to control them. Yes, so that they know they are here to learn. The learners learn a lot because they learn to play. They don't know that they are learning but they are learning. They like to be involved in all activities.*

Therefore her activities, especially computer time, were teacher-centred and teacher-controlled:

The teacher sat in front with one learner facing the computer. Two games were played i.e. one where the learner had to match the size of the shoes with the size of the people's feet. The other game involved counting cookies out to give to a horse. All the learners

were very excited to play this game, but only a few (6) had the opportunity to do this, whilst the group watched. The teacher assisted the learner in manipulating the mouse, but did not engaged in any discussion or guiding questioning regarding the content of the computer programme.

During her discussion of the worksheet Participant 8 informed the learners as to what a pet animal was, and then told them which colour crayons to use when colouring in the pictures on the worksheet:

The teacher did not have a pink crayon and therefore she instructed them now to use red crayons. She made it clear that she did not want other colours being used except black, brown and red. She then briefly discussed with them what a pet animal was, and that they had to be coloured black. In order for the learners to grasp the black colour concept the teacher asked them to show her who is wearing something black, like black shoes. The teacher instructed the learners to count and write the number symbol in the circle at the bottom of the worksheet. She requested learners to make a number 2 in the air, whilst she verbalized her demonstration of how to make a 2, 3.

During her numeracy ring, Participant 9 initiated all the rhythmic clapping patterns and number identification actions, with no opportunities for learners to initiate a pattern or identify a number symbol:

The teacher clapped a pattern and the learners had to count it. Thereafter, the teacher asked a learner to pick a card with the number reflecting how many claps she made. The teacher repeated the clap of a pattern but this time with 5 claps. Learners

volunteered to show the card but only one learner was allowed to show the number 5 card. The teacher handed out a small number card to each learner. The teacher then showed a big number 6 flash card and requested the learners who had the same number on their small cards to join her. A few learners joined her and answered that they were had number 6. She then placed little holders on the floor and requested learners to put the number that she called out in the appropriate holder, from 1 to 6. The teacher requested a learner to take 3 counters and to place it in holder number 3. The teacher then issued cards with dots on them to specific learners who had to match the dotted card with the holder with the number of counters in it corresponding to the number of dots on the cards.

Participant 10 dominated the activities in the numeracy ring:

The teacher stood behind her desk and issued the instruction that there should be a girl between two boys which she called by name. After ensuring that the learners were sitting in a boy/girl pattern, the teacher instructed the learners to stand up and make a pattern with their bodies by touching their heads, tummies and legs. The teacher then asked the learners what would they prefer, legs or feet and they had to show by hands. She then counted how many and the majority, feet, won. The teacher proceeded to build a pattern with coloured balls, yellow, red, blue. A learner from each group had to place his/her colour in the pattern. The teacher called the learner from the next group to come and place his/her ball in the pattern. The teacher asked the learners if the reds and yellows were equal and they answered: "yes". She then asked them how many blue balls there were and she counted them herself, with a few learners who wanted to do so, one by one. They agreed that there were 7, and the teacher confirmed that the blue, red and yellow balls were equal. The teacher then invited a girl to count the balls

whilst the teacher pointed to them. The teacher showed a picture of a cake decorated with candles on top.

Participant 14 handled the abacus herself when the learners counted to ten:

The teacher informed the learners they were going to count. A learner was instructed to fetch an abacus, whereby the teacher moved the beads one by one and the learners had to count to 10 in English and then repeated the 1-10 counting in isiXhosa. The learners were instructed to stand up and to jump rhythmically whilst they counted from 1 to 10.

In the classroom of Participant 15, the teacher controlled the glue painting activity:

At another table, the teacher poured out some glue and painted the fish with it. The learner then took some shredded paper pieces and placed them on the worksheet with the fish picture on it which was now full of glue. The teacher requested the learners to cut the pieces of paper in smaller pieces, if they found them too big. The teacher requested one learner to also put some red pieces of paper on her fish picture. This activity took place in complete silence.

Participant 15 acknowledged that she knew that the learners had to do the actions themselves:

*I usually do it because they mess. But I usually tell them, it must be you who do it but guys, I cannot eh-eh, let me just do it for you.  
Well, I know it is wrong, but I do it.*

Silent Theme (b), namely displaying a reluctance to go beyond the minimum requirements of the assessment standards, contrasted with the beliefs and perceptions of the Focus Group Interview Participants. The participants of the Pilot Focus Group stipulated that:

Teachers should ensure that activities cover all areas of development, e.g. physical, social, and mental. Learners should be involved in all activities as individuals, in pairs or in groups. Learners must be motivated and stimulated by the classroom activities.

The Method of Difference identified five classrooms in which the teachers did not go beyond the minimum requirements of the assessment standards. Participant 1 insisted that learners stick to the number that she instructed them to count:

Some learners counted out 4 counters. The teacher intervened and instructed them to count out only 3 counters.

Although Participant 2 made provision for a weather chart and a discussion of the concept of time, no in-depth discussion took place:

Learners recited days of the week and names of the month like a rhyme. The teacher used a learner to identify the weather of the day and then checked with the rest of the class whether the learner

identified the weather correctly. There was no individual questioning to make sure that the learner understood the concepts and was not merely reciting a rhyme, e.g. What is the day before Tuesday called? What is the day after Tuesday called? What is the month before June? What is the month after June? What are the months for Winter?

Despite the fact that the learners could count further than ten, Participant 8 restricted the learners to making only the number symbols 1, 2, 3 and 4:

The learners had to count shapes: triangles, circles and squares. They did not count them together but had to remember how many of each there were. The teacher asked the group how many of each shapes there were, e.g. How many circles? The children shouted different answers, eventually reaching consensus at 17 circles, 14 triangles and 13 squares. She then asked them which group was the most. Somebody said the circles, which she then confirmed that the circles were the most. The teacher handed out paper shapes [square, triangle and circle] to the learners and the learners sat at the tables in shape groups. She went from group to group asking, holding up a paper shape in the air, why was it a square? She answered by saying it had 4 sides etc. At the square table, she asked the learners to take out one cold drink bottle lid and to place it in the middle of the shape. Once the learners placed their lids in the middle of the square, she requested the learners to show to her, how to make a number symbol 1 in the air. She then verbalized and demonstrated it in the air to the learners. Once they had finished copying her, they were instructed to fold their arms. The teacher went to the circle table. The teacher instructed the learners to take only 2 lids from the holder, which she held in front of them, one by one. She asked them to place it in the middle of the circle. She then requested the learners to count the lids by touching them with their

fingers, 1, 2. The teacher also requested the learners to make a number 2 symbol in the air, by verbalizing and demonstrating it to them.

Participant 14 did not encourage learners to build bigger patterns which involved more beads:

The teacher told the learners that she was going to make a pattern with these shapes. The teacher picked up the forms and organised them into a pattern: triangle, circle, rectangle, square. The teacher then told the learners that they were also going to make a pattern, *just like she did*. One learner packed out the pattern whilst the other learners were looked on. She only packed out a pattern of 4 shapes, green triangle, yellow circle, yellow square, and green square. Although the teacher asked which shape each was, no further creativity or encouragement was solicited by asking the learner to make a pattern with more than 4 beads.

Participant 15 did not encourage learners to go beyond ten when they counted out pom-poms in their mother tongue:

A learner was busy counting out 10 pom-poms in isiXhosa, in the middle of the circle, whilst the other learners looked at what she was doing. When the little girl reached 10 she stopped, and the class clapped spontaneously, without any encouragement from the teacher.

The third silent theme, namely, Limited open-ended questions appealing to learners' creative, thinking, reasoning and problem-solving skills, was evident in the transcriptions of the videotapes of Participants 1,2, 8, 9, 10,14 and 15.

During her Numeracy activities, Participant 1 asked only closed questions without inviting any discussion:

The teacher then asked the learners to tell her the names of the vegetables she was pointing to on the worksheet. The learners started amongst themselves identifying some of the pictures, e.g. carrots. The teacher told them that the picture was not about carrots. The teacher then went to the theme table and pointed to the beans vegetable picture and asked the learners again what it was. The learners answered that it was green beans. The teacher then pointed to another picture on the worksheet, whereupon some learners said it was a tomato whilst the others said it was a beetroot. The teacher confirmed that it was a beetroot.

It seemed, when she was busy with her perceptual ring, as if Participant 2 had previously coached the learners in memorising opposites:

The learners were requested to name opposites which they recited one by one like a rhyme. There was no discussion of any opposites or any practical demonstrations of opposites, i.e. showing with your figure a tall man and a short man.

Like Participant 1 above, Participant 8 focussed also on asking closed questions with limited opportunity for discussion and the learners' to use their own creative thinking and problem-solving skills:

The teacher discussed a worksheet with animals on it with the learners, asking them which animal was in the first picture [a sheep], the second [a cat], and the third [an elephant]. She asked the learners whether the animals are a house, farm or wild animal. She showed them that at the bottom of the worksheet, there were pictures depicting a house, bushes and farm, She asked them how would they knew it was a farm? One of the learners answered that the farm picture had a tractor in it.

During her theme discussion Participant 9 failed to use a learner's own answers to elicit further creative thinking and reasoning:

The teacher asked the learners what the name of the theme was and a learner answered that it was communication. The teacher repeated that it was *kommunikasie* in Afrikaans. The teacher then reminded the learners that one could communicate with the telephone. The teacher then showed the learners a cell phone. A learner responded by saying that it was “n opskuif ene”. The teacher then showed the learners a small radio, and saying one could listen to the news, stories. When a learner did not understand, the teacher switched to isiXhosa. When the teacher asked if the learners could see the people talking over the radio, a learner answered that they could be seen on TV. The teacher emphasised, first in English and then in Afrikaans, that people could be seen on television. The teacher reminded the learners that communication could also take place through letters, in English and Afrikaans. The teacher reminded the learners that they could also communicate through books. The teacher then started to discuss the front page of a book.

Participant 10 was not aware that a spontaneous problem-solving situation arose during the outside movement activities when the learners had to practise for a sports day:

Learners played spontaneously with the beanbags. When a beanbag was stuck in a tree, one learner threw his beanbag at it and the others followed his example. The teacher failed to capitalise on or even notice this spontaneous problem-solving situation: one beanbag was caught in the tree and the learners wanted to solve the problem – one boy started to throw his beanbag at it and the other learners followed his example, until the beanbag fell down. There was no discussion of who threw the furthest, shortest, or highest.

Participant 14 asked only closed-ended questions when the theme was discussed. No in-depth discussion took place and no pictures depicting the usage of water and/or three-dimensional apparatus were observed. Rote learning was also evident when learners had to repeat sentences that the teacher uttered:

The teacher asked the learner: “What are you learning about today?” The learners responded that they were learning about water. The teacher then asked the learners what water helps us with? The children responded by saying they drink water. They also answered that they used water for washing, cooking. The teacher then asked the learners how many glasses of water one should drink a day? The learners answered eight glasses of water. The teacher confirmed that a person needed to drink eight glasses of water a day. The learners repeated her words parrot-style: one should drink eight glasses of water a day.

Although Participant 15 asked an open question, she reprimanded the learners for not giving her the answer she wanted:

Learners stood in a circle while the teacher, also standing, asked them: “What day is it today?” The learners responded by saying: “It is Wednesday today”. The teacher then requested the learners to say the months of the year. The learners responded by saying that there were twelve months and then named them one by one. The teacher then asked the learners what was the name of the month that they were in currently? After a short while, when no one responded, she repeated the question. One learner said it was October. He was praised by the teacher and received applause from his friends. The rest of the class repeated as a rhyme that the current month was October. The teacher then asked the learners what October meant. One child responded by saying that October meant that it was very hot. The teacher then requested the learners to think again and to answer properly. The learners recited the names of the months again until they came to October. The teacher requested the learners again what October meant and they answered that “October is the month that they are currently in”.

The transcriptions of the audiovisual recordings of seven participants revealed the absence of developmentally appropriate practices in their classroom. Although the individual interviewees confirmed the importance of concepts being experienced concretely, as indicated in their individual frameworks, the fourth silent theme was evident when Participants 1, 2, 8, 9, 10, 14 and 15 focussed primarily on completing worksheets.

The fifth silent theme, namely Limited opportunities for learning through play, was observed in the transcriptions of the videotapes of Participant 1, 2, 8, 9, 10, 14 and 15.

Participant 1 did not make provision for free-choice play activities inside the classroom, despite having the resources to do so.

Participant 2 provided scope for free-choice free-play activities, but with a very short time-frame:

Only when they had finished their creative activities were learners allowed to choose whether they wanted to draw a picture at the back of the big papers, or whether they want to play with dough or play in the fantasy area. The free play time was very short, as it was only allowed whilst the other learners were finishing the creative activities – plus minus 8 minutes. The dough play area was limited to 6 learners and more than 10 learners crowded around this table. The fantasy corner was also cramped with too many learners in such a small place. No block play was put out or encouraged.

Participant 8 did not make provision for learning through play in her daily programme.

Participant 9 did not do justice to exposing learners to free-choice and free-play learning activities, as learners engaged with educational toys for only 15 minutes.

Participant 14 neglected to make provision for learning through play activities inside the classroom:

Once the learners had completed their worksheets, they sat on the carpet and played with a few big Lego blocks. However, as more learners gave in their worksheets, the space on the carpet as well as the amount of blocks to be shared became limited. For the first time, learners spontaneously interacted with materials and had free discussions with one another when they played with the blocks.

Participant 14 dominated the outside free-play activities:

The learners went outside to play freely. Learners walked and talked and chased each other. Some learners tried to do hand stands. The teacher handed out one ball. Most of the learners wanted to play with the ball. The teacher and assistant looked whilst they were throwing and catching the ball. After a short while, the teacher decided to join in with the playing with the ball. The teacher then controlled the game, whereby she threw the ball to learners and they had to catch it and throw it back to her. The free-choice play activity outside lasted only 15 minutes.

Although Participant 15 did make provision for free-choice free-play activities inside her classroom, she missed out on verbalising the numeracy concepts which were played out by some learners:

The learners engaged in free-play activities such as playing with dolls in the fantasy corner area and building with the blocks in the block area. Whilst the learners were engaged in free play the teacher swept the carpet. Because of the lack of space, some learners started to move to the tables and play there with the dolls and the cutlery. Some boys started to play with the wooden cars and blocks on the carpet. The doll area and the block area were placed next to each other, half a metre away from the creative art

tables. There was not enough room for building with the blocks and only a few learners (3) could play with the dolls. The teacher missed out on opportunities to encourage learners to experiment, discover and explore with the educational toys during the free-play activities, while she was sweeping the floor. One learner acted out the concepts of inside and outside, when he built a shelter in which he placed some objects. However, the teacher failed to notice this spontaneous act of playing out concepts and did not comment on it. Another learner started to build a tower and again the teacher did not comment on the concept of height and balance.

The sixth silent theme, namely, Ineffectual organising and managing the Grade R class to enhance numeracy skills, came to the fore when the perceptions and feelings of the participants of the Focus Group Interviews and the transcripts of the recordings of classroom activities were compared with each other. According to the Pilot Focus Group Interview Framework, which was endorsed by the individual interviewees, a high premium was placed on organising the classroom environment to use all relevant resources for learning:

Good planning ensures optimal learning. I plan what I want my learners to achieve. Good planning involves relevant resources. The time of day is important as mental work should take place earlier than later in the day – one needs to plan for this.

The Interview Framework of Coastal Group B confirmed the importance of preparing the daily programme activities:

The Daily Programme assists teachers in their preparation and planning for each of the sections of the daily programme and the

accompanying assessment. The Daily Programme is creating a balance between teacher and learner directed.

The learners were bored and restless during the school-readiness activities of Participant 1. She failed to make provision for preparing the environment in order for each child to be engaged with a variety of activities:

The teacher sifted through a puzzle box/holder for pieces. At another table, 10 learners were each given a few domino cards. Two Learners took control of the cards by just shuffling it in their hands whilst the other learners just watched them listlessly. One child built a card house with his cards, and some learners followed his example. The teacher instructed the learners to focus on playing domino, thus matching the cards. She then played the game herself by explaining the game to the learners, whilst they watched how she matched the domino cards. Once she left the table, the learners were back to not knowing what to do or how to do it, and just looked bored.

As mentioned above when the fifth silent theme was discussed, Participant 2 did not organise her classroom to make provision for having adequate free-play time, toys, equipment and space.

Although Participant 3 tried to introduce a different setting for the storytelling activity, it was not carefully planned:

The teacher built a pavilion for the learners to sit on, whilst she and the learners recited the story, following big story flash cards which were put up in the fantasy corner. Although all the learners enjoyed

and participated in the story, which was familiar to them, the pictures of the story were not always very obvious to them. Making use of the pictures on the wall of the fantasy corner was somewhat confusing as another story was also put up below the same pictures.

The laissez-faire classroom of Participant 8 contributed to the discipline problems in she was experiencing:

The classroom was unorganised and had a space problem. The pictures and posters on the walls were crinkled and folded. Files and boxes were stored on the racks instead of being put away in a cupboard. The untidy teacher's table took up unnecessary space in the classroom. The shelves were untidy, stocked with equipment such as tins with dirty paintbrushes, pieces of paper etc. Not all the learners were involved in the creative activities. Some learners wanted to play and started to wrestle with each other, as no provision was made for them to be engaged with educational toys or fantasy play. One learner found a toy piano and started playing on the floor with it. Other learners found a ball and started kicking it in the classroom. The learners were bored with the activities and longed to have free-play with other stimulating apparatus.

Participants 9, 10, 14 and 15 need assistance in organising their classrooms to be stimulating and inviting for learners to explore, experiment and discover. They need to organise their fantasy and educational play areas in such a way that there are enough time, space and resources available for learners. Participant 9 experienced the following organising problems in her small classroom:

A block play shelf and an unorganised educational toys shelf were placed in front of the class. The theme table was unorganised, with

various papers lying around. A small area was allocated for fantasy and block play. The nature table was displayed on a shelf but was not inviting and easily accessible for learners to explore and discover.

The Grade R learners at the school of Participant 15 shared a formal break time with the rest of the Grade 1 to 9 learners:

Learners walked around and mingled with the rest of the primary school learners as they were having their formal break-time. When the bell rung at 11h00 for the Grades 1- 9 learners to have their break, the Grade R learners were left to join the older children. No supervision was done by the teacher and the assistant, as they were having their tea inside the classroom.

These six silent themes all appear to be somewhat negative. But while they may have revealed weaknesses in Grade R classrooms, a weakness is not necessarily a permanent defect and can be rectified or remedied. The term “silent theme” indicates that the teacher was unaware of the impact of her behaviour and actions in the classroom. The silent themes depict a need for further training to address the lack of teacher skills evident in seven of the classrooms observed.

In summarising the comparison of data regarding the category *Classroom activities* the following directives were found:

- There was no inconsistency between the transcripts of the interviews and the videotapes regarding the themes “Planning”. The frustrations that were voiced by all the participants were evident in the classroom activities of

five participants who did not implement planning effectively in their classrooms.

- The transcripts of the recordings of seven classrooms in which attempts were made to teach mathematical concepts supported the feeling voiced by seven individual interviewees that they needed to undergo further training in this regard.
- The classroom of the interviewee [Participant 2] who acknowledged that she was not implementing what the focus group participants were preaching regarding being learner-centred, learner-paced and learner-based, was found to be teacher-centred, teacher-paced and teacher-based.
- Inconsistencies between the transcriptions of the individual interviews and the videotapes of classroom activities led to the emergence of six silent themes in seven classrooms.
- The limited presence or absence of silent themes in the transcriptions of the videotapes of classroom activities of Participants 3 and 11 confirmed that these teachers were implementing their beliefs, experiences, knowledge and feelings as voiced in their individual interviews.

- ***Teachers' experiences***

In the above-mentioned category I focussed on the themes "Learner's Involvement" and "Teacher's Attitude" when I compared the transcriptions of the individual interviewees with the videotapes of classroom activities.

By using the Method of Agreement as a technique, I found that the nine participants were not only saying that they were committed teachers but were indeed actively involved with their learners' teaching and learning opportunities, as reflected on the audiovisual recordings of their classroom activities.

The Method of Difference indicated that although seven participants expressed a need for training in teaching numeracy, they did not request to be trained in learner involvement. The transcripts of the videotapes of their classroom activities revealed that the silent theme "Teacher-centeredness" could be observed in seven classrooms, with limited learner involvement taking place

despite interviewees voicing their belief in the importance of active learner involvement (see the discussion, above, regarding the first silent theme, “Teacher-centeredness”).

The analysis and comparison of data regarding the category *Teachers’ experiences* indicated the following directives:

- There was no inconsistency between the transcripts of the interviews and the videotapes regarding the theme “Teacher’s Attitude”;
- Inconsistencies between the transcriptions of the individual interviews and the videotapes of classroom activities led to the confirmation of one silent theme, namely “Teacher-centeredness”, as present in seven classrooms.

In summing up the data analysis of the transcriptions of the Individual Interviews compared with the transcriptions of the audiovisual recordings of Classroom Activities, I identified the following patterns:

- Pattern 3 which confirmed the training needs of seven of the interviewees;
- Pattern 4 expressing the frustrations of nine interviewees regarding the theme “Planning”;
- Pattern 5 showed that two participants, namely Participant 3 and Participant 11 differed with the rest of the individual interviewees by asserting that their formal training empowered them to implement numeracy activities
- that were hands-on, practical and likely to enhance the problem-solving and thinking skills of the Grade R learners.
- Pattern 6 confirmed that nine participants addressed barriers in their classrooms, followed a daily programme, made provision for numeracy concepts and were committed to fulfilling their role as a teacher;
- Pattern 7 indicating that not all participants shared similar experiences regarding resources, classroom atmospheres, and planning;
- Pattern 8 identified a lack of skills on the part of seven teachers in teaching numeracy effectively in their classrooms, as depicted by the six silent themes (Teacher-centeredness, Reluctance of the teacher to go beyond the minimum requirements of the assessment standards, Limited open-ended

questions which appeal to learners' creative, thinking, reasoning and problem-solving skills, Absence of developmentally appropriate practices, Limited opportunities for learning through play, and Ineffectual organising and managing of the Grade R class to enhance numeracy skills).

- Pattern 9 indicated that the limited presence or absence of silent themes in the transcriptions of the audiovisual recordings of the classroom activities of Participants 3 and 11 confirmed that these teachers were implementing the knowledge, perceptions, feelings and beliefs voiced in their individual interviews.

The next step that I followed, once I had completed the data analysis, was to “to move from description to explanation and theory generation” (Cohen, et al., 2002, pp. 147–148).

## **6.4 FINDINGS OF THE DATA ANALYSIS**

Before I embark on theory generation based on the above-mentioned nine patterns, it is important that I return to the research problem or question. The discussion of the findings regarding the identified patterns and the subsequent theory generation will attempt to give answers to the research question and its sub-questions.

In Chapter 5, the research question was posed, namely “What are the experiences of selected teachers of teaching numeracy in Grade R?” In order to contextualise the empirical investigation of teachers' experiences and challenges in teaching numeracy the following sub-questions were formulated:

- What are the experiences of selected teachers of teaching numeracy in Grade R/
- What are the challenges that face Grade R teachers when they implement numeracy? and
- How do teachers' experiences regarding numeracy influence and affect their teaching strategies in numeracy?

The first question is answered by Patterns 1 and 6. Pattern 1 came into existence when the participants confirmed the seventeen themes of the interview frameworks as reflected in the data analysis of the three focus group and nine semi-structured individual interviews. These seventeen themes depicted that the Grade R participants knew what a Grade R classroom should look like and what the learners' and teacher's roles in this classroom entailed. Pattern 6 was the result of the data analysis of the transcripts of the videotapes, where it was seen that nine Grade R participants addressed barriers to learning in their classrooms, followed a daily programme, made provision for numeracy concepts and were committed to fulfilling their role as teachers. It is therefore found that the Grade R participants in this study have a theoretical comprehension and awareness of what Early Childhood Development and Grade R entails. This finding correlates with the conclusions of the Baseline Study Report (South Africa. ECDoE, (2008a): "Therefore it can be said that ECD Practitioners who have graduated from the Level 4 courses with the two service providers, are competent" (p. 89). The Baseline Study Report (South Africa. ECDoE, (2008a) adds that "the research shows that the practitioners know what their roles and responsibilities are" (p. 90).

Patterns 3, 4, 6, 7 and 8 highlight the challenges that Grade R teachers face when they deal with numeracy, as per the second research sub-question.

Patterns 3 and 4 indicate the training needs that the individual interviewees identified in response to the challenges they experienced in their classrooms. Although Pattern 6 indicated in the previous paragraph that Grade R participants were addressing barriers to learning in their classrooms, Pattern 3 emphasises the need for further in-depth training to address the question of barriers or impediments to learning, of enrichment, and of remedial intervention activities for young learners. Pattern 3 also includes other training needs, namely how to introduce and handle numeracy concepts in practical, hands-on activities, as well as how to enhance learners' problem-solving and thinking skills. Pattern 4 indicates that all nine individual interviewees expressed their

frustration and dissatisfaction with the theme “Planning” as it was confusing and time-consuming.

Patterns 7 and 8 were not identified by the individual interviewees as problematic. In contrast, the data analysis of the transcripts of the videotapes of seven classroom activities showed problems such as not providing Grade R learners with a variety of educational toys and equipment in and outside the classroom, and not giving sufficient opportunities for free-choice and free-play activities. These problems or challenges indicate strongly that the seven teachers' concerned need to undergo further training regarding planning, organising and managing classroom activities that will enhance numeracy development among young learners.

The transcripts of the videotapes of classroom activities reflected teachers' lack of skills, which emerged in Pattern 8 as silent themes because the teachers were unaware of the following shortcomings, namely, teacher-centeredness, a reluctance to go beyond the minimum requirements of the assessment standards, limited open-ended questions which appeal to learners' creative, thinking, reasoning and problem-solving skills, the absence of developmentally appropriate practices, limited opportunities for learning through play and a lack of organising and managing the Grade R class to enhance numeracy skills.

In contrast, two participants claimed and demonstrated that they did not experience these challenges in their classrooms. Pattern 5 came into existence because Participants 3 and 11 had different experiences of barriers to learning from the other seven participants. Both participants believed that their intensive formal three- and four-year training in early childhood development, developmentally appropriate practices and teaching methodologies empowered them to deal with learners in need of remedial and intervention strategies. Based on the transcriptions of the videotapes of classroom activities, Pattern 9 confirmed that these two participants provided their learners with numeracy activities that were learner-centred and developmentally appropriate. The two teachers ensured that they went beyond the minimum requirements of the

assessment standards and asked open-ended questions which made an appeal to learners' creative, thinking, reasoning and problem-solving skills. They planned, organised and managed their Grade R classroom in such a way that various opportunities for learning through play, exploration, experimentation and self-discovery were available to the young learners. Pattern 9 indicates that the limited presence or absence of silent themes in the transcriptions of the audiovisual recordings of the classroom activities of Participants 3 and 11 confirms that these teachers are implementing their beliefs, experiences, knowledge and feelings voiced in their individual interviews.

With the exception of two participants, the above-mentioned challenges experienced by the teachers and manifesting themselves in their classrooms impact negatively on the quality and competence of Grade R teaching. The Baseline Study Report (South Africa. ECDoE, (2008a) echoes this finding:

**ECD practitioners** in general knew what they are required to do as a result of the qualification programmes they had attended during this study. There was however, little **performance** of competence visible during the field research visits. The majority (57%) of **Reception Year classes** were found to be not conducive to children's positive development within the three domains of psychomotor (sensorial and physical), socio-affective, (social and emotional) and cognitive (building of synapses between brain cells for positive learning) development. (p. 9)

The third sub-research question, namely "How do Grade R teachers' experiences regarding numeracy influence and affect their teaching strategies in numeracy?" is addressed by Patterns 2, 4, 6, 7, 8 and 9 .

Pattern 2 highlights one Grade R practitioner's frustration with the discipline problems being experienced in her class, as well as her response to the problem:

*Ek gaan met hulle voort, diè wat betrokke wil wees. Ek gaan nie 'n kind forseer nie. As hy nie betrokke wil wees nie ... Dan gaan ek met die anders aan, wat belangstel. Want daar 's 'n hele paar kinders wat baie, heelwat woelig is en ek kan nie dat hulle my onderkry nie. As ek saam met daai outjies gaan, dan gaan ek daardie kinders verloor...*

Pattern 2 cautions the reader that such a lack of discipline may lead to learners being without a teacher and thus not being exposed to numeracy learning opportunities. The over-crowding and discipline problems that this teacher experienced caused overwhelmed and demotivated her. She took two days extra leave from school in order to get away from such a disastrous situation:

*... 'n Groot frustrasie! Daarom dat ek daai maand wat ek siek was, het ek sommer twee dae by die huis gebly.*

According to Pattern 4 all the participants were frustrated by the prescribed method of planning. This frustration impacted negatively on the planning, preparation and provision of numeracy activities in classrooms. According to the video recordings of classroom activities, most of the teaching strategies in numeracy were limited to counting activities, apart from random measuring and patterning activities by two teachers, which in any case had to be copied by learners. There was an emphasis on worksheets, which some teachers used as a remedial tool. Although learners traced or coloured in the pictures on the worksheet, they did not know why they were doing it. There was a notable absence of hands-on approaches to the teaching of numeracy concepts and skills.

Pattern 8 agrees with Pattern 4 that a teacher will not be able to plan for effective and successful numeracy teaching and learning opportunities, if she lacks the knowledge and skills to implement numeracy in a developmentally appropriate manner. Pattern 8 implies that if a teacher had the necessary knowledge and skills, such a teacher would be empowered to plan for numeracy activities that are learner-centred, developmentally appropriate, and provide various opportunities for learning through

play. Such planning would ensure that the Grade R classroom is organised and managed to enhance numeracy skills. In her planning the teacher would ensure that she goes beyond the minimum requirement of the assessment standards in order to enhance learners' creative thinking, reasoning and problem-solving skills by asking them open-ended questions.

Patterns 5 and 9 provide evidence of the importance of in-depth training as well as personal development through life-long learning. Only in two classrooms were creativity, thinking, reasoning and problem-solving skills encouraged. Participant 11 testified that she attends various courses and is an avid internet reader:

*So I have always been basically with your pre-school child. And after that, I trained, I basically continued training, I did the HDE in pre-primary and then after that, which was my fourth year, I continued to do my FDE in pre-primary training at teaching science at the junior primary. I have done the Kindermuzik; I am a trained facilitator, licensed facilitator... Yes, I am also a Brain-gym teacher and an Audioblox teacher. Ja, I have just gone on an integrated learning therapy course... I am a daily user, Uncle Google and I am best buddies.*

The above-mentioned lack of developmentally appropriate teaching strategies for numeracy was confirmed in the *Baseline Study Report* (South Africa. ECDoE, (2008a). According to this report, it ascertains that

The majority of classrooms did not demonstrate learning occurring through active exploration of the environment. ... We did not see a great deal of evidence of learning-centred activity. The majority of ECD practitioners were teaching as they probably had been taught (teacher-controlled) ... using the traditional teacher-tell methods with passive quiet learners. (South Africa. ECDoE, 2008a, p. 89)

Although Patterns 2, 4 and 8 suggest shortcomings in respect of numeracy instruction, because of the challenges that teachers experienced regarding discipline, planning and dealing effectively with numeracy in their classrooms, Pattern 6 points out that all nine participants were committed to fulfilling their role as a teacher. This positive attitude resulted in teachers trying to address perceived barriers to learning, despite having limited knowledge and experience in this area. It motivated teachers to implement a daily programme in their classrooms which made provision for exposing learners to numeracy concepts. Pattern 7 echoes the positive attitude of the teachers, which meant that eight of the nine classrooms had adequate educational toys and equipment as well as happy, relaxed and respectful atmospheres.

On the negative side, Grade R practitioners appear to lack the skills to teach numeracy in a Grade R context. They were frustrated with planning and experienced a lack of knowledge and skills regarding how to implement numeracy practically and in interesting ways in their classrooms. The challenges they experienced in the course of their attempts to teach numeracy in their classrooms had a negative impact on their numeracy teaching strategies, which tend to be teacher-centred and teacher-controlled.

## 6.5 CONCLUSION

Although the picture being painted of teachers' experiences in supporting the development of numeracy in Grade R seems to be bleak and consistent with view of the *Baseline Study Report* (South Africa. ECDoE, 2008a) that "the quality of learning and teaching in 250 Reception Year classrooms ... [is] exceptionally low", the teaching of numeracy is not doomed. The urgent appeal for appropriate training and monitoring cannot be ignored (p. 96). The teaching of numeracy by two Grade R teachers testifies to the importance of training and mentoring, as they were empowered to deal with numeracy challenges in their classrooms by the three to four year full-time training they had received, and by their regular attendance at in-service training regarding

Early Childhood Development. In order to address the lack of proficiency in bridging the gap between the theory and practice of teaching numeracy in Grade R, the importance of mentoring visits were stressed by Participant 2:

*Yes, I wish someday, one day to get someone to tell me maybe the activity for this one, this is the activity. Yes.*

## 7.1 INTRODUCTION

From the results of the open-ended focus group interviews and the semi-structured individual interviews reported in Chapter 6, one might conclude that Grade R teachers are generally knowledgeable about teaching at the Grade R level. This finding is consistent with the *Baseline Study Report* (South Africa. ECDoE, (2008a), which states that “[t]he research shows that the practitioners know what their roles and responsibilities are” (p. 90).

However, this research study has also found that there are inconsistencies between what the teachers say and believe, and what they practise in their classrooms. According to the *Baseline Study Report* (South Africa. ECDoE, (2008a), one of the reasons why Grade R teachers and practitioners do not implement their knowledge in their classrooms is due to the fact that the Education District Offices in the Eastern Cape do not fulfil their role of supporting and monitoring these classes.

The lack of support and monitoring from the schools; the lack of knowledge in the schools as to the purpose of the Reception Year; the lack of implementation of the NCS by all parties in the school and the lack of regular support and monitoring by the circuit managers and district ECD personnel, hampers them in performing their competence. (p. 90)

The *Report of the Task Team for the Review of the Implementation of the National Curriculum Statement* (South Africa. DoE, 2009) emphasises that, despite the limited knowledge and skills of district personnel, especially subject advisors, the implementation of the NCS (South Africa. DoE, 2002b) lies on their shoulders as they act as “intermediaries between curriculum policy and implementation in the classroom” (p. 8).

These offices have been subject to the same degree of change as teachers, and in many cases, a superficial understanding around curriculum exists. Further, in several provinces there are a large number of recently appointed subject advisors, who have received less training on the curriculum than the teachers themselves, and have not had the experience of actually teaching the curriculum. (South Africa. DoE, 2009, p. 23)

These findings, shared by the *Baseline Study Report* (South Africa. ECDoE, (2008a) as well as the *Report of the Task Team for the Review* (South Africa. DoE, 2009), have serious implications for the implementation of numeracy teaching in Grade R classrooms.

One must ask whether the statement quoted above from the *Baseline Study Report* (South Africa. ECDoE, (2008a), to the effect that teachers do not have sufficient high-quality and effective support and monitoring, identifies the only reason why teachers do not implement what they have been taught?

This study has shown that it is indeed not the only reason why Grade R teachers are not teaching numeracy effectively. The reasons are more complex and nuanced, as was demonstrated in Chapter 6. There is a clear disjuncture between theory and practice, as reflected in the data analysis of the individual interviews and the videotapes of classroom activities.

## 7.2 IMPLICATIONS FOR THEORY AND PRACTICE

Chapter 2, which focussed on the historical and political context of Early Childhood Development in South Africa, revealed that Grade R teachers came from different backgrounds with different training and teaching experiences. This impacted on their implementation of numeracy instruction as can be seen from the findings of the data analysis (see paragraph. 6.4). Two participants explicitly stated that their intensive formal three- and four-year training, focussing on the traditional programme under the House of Assembly prior to 1995, empowered them to implement numeracy effectively in their classrooms. Seven participants, who not only expressed in the previous chapter, training needs regarding teaching numeracy in a hands-on and developmentally-appropriate manner, received non-formal ECD Level IV training since 2002. The manifestation of a teacher's background is evident in the following quotation of the *Baseline Study Report* (South Africa. ECDoE, (2008a) whereby it ascertains that

The majority of ECD practitioners were teaching as they probably had been taught (teacher-controlled) ... using the traditional teacher-tell methods with passive quiet learners. (p. 89)

Therefore, the lesson learnt from this chapter and thus, the first implication for the practice, is that teachers have a historical background which influences their teaching of numeracy in Grade R classrooms.

The second implication for the practice is found in Chapter 3, when the *Report of the Task Team for the Review of the Implementation of the National Curriculum Statement* (South Africa. DoE, 2009) warns that if teachers do not have a clear understanding of curriculum policy and how curriculum implementation should take place, they can

hardly be expected to implement the curriculum. It must be recognised that the frequency of change has left many teachers bewildered.

Our recent curriculum history has been characterized by radical change within a relative short period. The result has been a high level of confusion amongst teachers around what they are expected to do. These past changes have left tracks in teachers' current understandings and practice, particularly tracks of *Curriculum 2005*. (South Africa. DoE, 2009, p. 24)

The uncertainty about how to implement the numeracy learning programme curriculum came to the fore in the data analysis of the semi-structured interviews, when all nine individual interviewees expressed their frustration and dissatisfaction with the theme "Planning" as it was confusing and time-consuming. (See paragraph 6.4). One participant (Participant 2), voiced her anxiety with regard to planning and curriculum implementations in the following words:

*Yes, I wish someday, one day to get someone to tell me maybe the activity for this one, this is the activity. Yes.*

Chapter 3 described in detail the curriculum policy developments that teachers have had to implement since 1998. Teachers have had to make several major adjustments to the way in which they teach numeracy in their classrooms. With the proposed introduction of yet another curriculum change, the CAPS (South Africa. DoBE, 2010f) in 2011, Foundation Phase teachers, including Grade R teachers and practitioners, need to make another mind shift regarding the implementation of numeracy teaching. Therefore it is of great importance that the DoBE and training organisations ensure that Grade R teachers have a clear and apparent understanding of how to appropriately interpret the new envisaged curriculum.

The third implication for the practice has a close relationship with the above-mentioned second implication whereby it is important to take notice of how young learners learn. The third implication comes to the fore in Chapter 4 when Piaget, Vygotsky and Bruner stressed the importance of learning through play, which includes exploration, experimenting, discovery, making choices and problem-solving. However, the video transcriptions in Chapter 6 reveal that many teachers are not using these valuable teaching strategies. This finding is echoed by the *Baseline Study Report* (South Africa. ECDoE, (2008a), which states:

The majority of classrooms did not demonstrate learning occurring through active exploration of the environment. Children were either playing by themselves (without structured play materials), sitting waiting quietly, or being 'taught' Grade 1 work in the traditional way (chanting 'sa se si so so' over and over again). (p. 89)

Jones (2005) points out that when teachers do interact with learners' play activities, they often dominate the interaction in order to maintain discipline and control (p. 201). In Chapter 1, we saw that Sheffield and Cruikshank (2000) advise that, while teachers need to interact and channel the play activities of learners, they must at the same time be careful not to dominate and control the play activities. Sheffield and Cruikshank (2000) make it very clear that "...activities cannot by themselves teach. Augment them with reading, writing, discussion, examples, and thought" (p. 356).

However, unless Grade R teachers and the Senior Management Teams at primary schools are buying into the principle of learning through "play with a purpose", when the *CAPS for the Foundation Phase* (South Africa. DoBE, 2010f) is implemented in 2011, it will merely be paying lip-service to this principle (p.6).

In view of the concerns expressed by the findings of the systemic evaluations of 2001 and 2008, as set out in Chapters 1 and 2, the danger might arise that teachers would

rather focus on achieving the three Rs (formal reading, writing and arithmetic activities) than exposing learners to activities in which they freely explore, experiment and discover their environment. According to Jones (2005) it was found that teachers would rather spend their time teaching numeracy and learning than allowing learners to engage in play activities (p. 202). Jones (2005) argues that one of the reasons why teachers preferred to focus on implementing a formal and direct teaching approach is that the formal approach has measurable results, whilst the results of free play cannot easily and directly be determined (2005, p. 202).

Although the *CAPS for the Foundation Phase* (South Africa. DoBE, 2010f) makes provision for structured and teacher-directed numeracy slots of 30 minutes per day, there is concern that teachers will over-emphasise the completion of worksheets and therefore ignore the importance of learners experiencing a concept kinaesthetically, concretely and semi-concretely (p. 6). In Chapter 4, I quoted Bruner's view that knowledge or intellectual development starts as an enactive mode, then moves to an iconic mode, and subsequently to a symbolic mode. According to Shunk (2008) the implications of Bruner's theory of cognitive growth are that new learning concepts need to be introduced concretely and three-dimensionally in the enactive mode (pp. 6-7). The draft *CAPS for the Foundation Phase* (South Africa. DoBE, 2010f) recommends that worksheets only be given to learners after they have experienced a concept kinaesthetically, concretely and semi-concretely (pp. 6-7).

In Chapter 1, researchers such as Grouws and Good (1989), Sawyer (1995), and Faber and Van Staden (1997) were cited as expressing their concern regarding the use of worksheets. Grouws and Good (1989) point out that good problem-solving activities in text books are scarce and if they do occur, the problem solving is based on a section of the "textbook that deals with verbal problems" and requires only that the learner "select a computational operation" (p. 60). Grouws and Good (1989) maintains that enough time must be granted to learners to discuss problems with one another and to describe their own attempt at solving a problem. Faber and Van Staden (1997) argue that commercially bought learning materials often do not take cognisance of the young learner's prior experience of mathematical concepts, knowledge, skills and attitudes,

and “tend to reduce autonomy: teachers decide on the problems, how many are to be tackled and when, and whether the answers are right or wrong” (p. 109). Sawyer (1995) adds that the over-reliance on workbooks in teaching mathematics is a reflection of teachers’ insecurities with the content (Sawyer, 1995, p. 141). In seeking to remedy this lack of confidence, Sawyer (1995) stresses the importance of effective in-service training and continuing support, “so that [teachers’] knowledge and understanding base and their confidence in teaching mathematics can be improved” (p. 203). Sawyer (1995) points out that the feelings and concerns of teachers regarding “unfamiliar content, new teaching and assessment strategies, the amount of required paperwork and record keeping, and increasing pressures and resultant stress” cannot be ignored (p. vii).

In the research study, Participant 15 agreed that work sheets are not stimulating:

*It is not stimulating, no. Yes. Every day, they must do different, you see today, they didn't change. I like to do it like that. Tomorrow they will be busy with that activity, I will just change them. I change them, the learners. Yes.*

Participant 1 acknowledged that the use of worksheets can contribute to barriers to learning:

*There is a lot of paperwork which can become a barrier, instead of teaching the teacher and learner are too involved with paperwork.*

A fourth implication for the practice that has come from analysis of the data transcriptions of the individual interviews as well as the analysis of the data transcriptions of the classroom videotapes, is the appeal by seven of the nine participants in this research study for further training on how to address barriers to learning in their classes. Although the findings of the *Systemic Evaluations* of both 2001 and 2008 suggest that there is a crisis if two thirds of Grade 3 learners are not numerate,

the proposed *CAPS for the Foundation Phase* (South Africa. DoBE, 2010f) makes no mention of how to address barriers to numeracy learning in Grade R classrooms. There is thus a serious gap in the implementation of the current milestones as stipulated in the *Foundation for Learning Assessment Framework Grade R* (South Africa. DoBE, 2010a) as well as the proposed *CAPS for the Foundation Phase* (South Africa. DoBE, 2010f), in respect of how to go about assisting a young learner who is experiencing problems with numeracy. In both the pre-service and the in-service training of Grade R teachers, there needs to be a greater emphasis on barriers to learning and remedial intervention.

In Chapter 1, Kirov and Bhargava (2002) were cited as emphasising that the informality of high-quality learning in the preschool years does not mean that there is no need to plan for attentive mathematics activities. Contrarily, mathematics learning should focus on opportunities to stimulate active learning that will enhance the use of rich mathematical language, like “what?” “how?” and “why?” questions (Kirov & Bhargava, 2002). Golbeck (2002) argues that if a teacher plans numeracy activities that are developmentally appropriate, such a teacher will then have clarity not only on the content that needs to be taught, but also regarding her role in how to teach the content. In Chapter 4, the concerns of Branscombe et al. (2002) were quoted regarding a pre-designed curriculum which is rigidly implemented according to prescribed steps:

the assumption is that the goal is to internalise a body of information in a particular order and often in a particular form. Teachers who use this approach are likely to believe that the learning is a process of taking something from the environment and memorizing it rather than constructing it based on the individual’s own actions and interactions. (p. 15)

The proposed *CAPS for the Foundation Phase* (South Africa. DoBE, 2010f) nevertheless prescribes for Grade R teachers a structured week-by-week programme of how numeracy concepts should progressively be taught (pp.2-118).

However, a fifth implication is that the proposed *CAPS for the Foundation Phase* (South Africa. DoBE, 2010f) does not take into consideration the prior numeracy knowledge and skills that a Grade R learner brings to school. The first number symbol that is being introduced to a Grade R learner during the third week of schooling is 0 or naught, whereafter the numbers are increased to 10 by the end of the year (South Africa. DoBE, 2010f, pp.2-118). The NCS (South Africa. DoE, 2003b) states that

The Grade R or 1 learners come to school with varied experiences of number work and number knowledge. Some can rote count whilst others only know a rhyme or two. Learners can usually show their age by putting up the correct number of fingers, but they often have no real number sense. Some learners will be able to work with money and even give change to a certain extent, but they can't do formal calculations involving money problems. Most young learners can share food fairly without having a concept of fractions. Differentiated learning activities should therefore be created to accommodate all the learners in the class (p. 60).

In Chapter 1, I cited researchers such as Schwartz & Riedesel (1994), Campbell (1997), Chambers (2000) and Sheffield and Cruikshank (2000), who urge educators to build on learners' existing numeracy knowledge:.

You are challenged to build on what children bring to the classroom and provide activities that help children further grow and develop their mathematical thinking and their understanding of the concepts of addition and subtraction. (Sheffield and Cruikshank, 2000, p. 154)

According to Clements and Battista (2002), "learning mathematics should be thought of as a process of adapting to and organising one's quantitative world, not discovering

pre-existing ideas imposed by others” (p. 6). Therefore, a variety of opportunities must be provided to young learners in order for them to explore their surroundings and environments. In this exploration of the environment the learner will use his/her current knowledge to structure and make sense of new information (Branscombe et al., 2002, p. 10).

In summary, it can be concluded that the reason why Grade R teachers are not implementing a developmentally appropriate, learner-centred and learner-based numeracy programme in their classrooms, cannot be attributed only to a lack of support and monitoring by district officials. A second reason why teachers do not implement their knowledge and skills in Grade R teaching, is that they might have been overwhelmed by all the curriculum changes of the past twelve years, as Chapters 2 and 3 of this study described. A third and perhaps most important reason why Grade R teachers do not implement their knowledge is to be found in the answers to the sub-research questions, namely:

- What are the experiences of selected teachers of teaching numeracy in Grade R?
- What are the challenges that face Grade R teachers when they teach numeracy?  
and
- How do Grade R teachers’ experiences regarding numeracy influence and affect their teaching and assessment strategies in numeracy?

Despite the fact that the selected Grade R teachers and practitioners in this case study believe themselves to be knowledgeable and skilled regarding numeracy in Grade R, and therefore perceive themselves as implementing numeracy instruction effectively in their classrooms, the findings of the data analysis reveal that many of the selected teachers do not have enough knowledge and skills to teach numeracy properly (see paragraph 6.4).

The implication of the findings of this research study for the practice or implementation of numeracy teaching in the Grade R classroom is that, unless Grade R teachers receive extensive training regarding the following challenges and needs (as identified in this study), Grade R learners will continue to lack the knowledge and

skills on which their numeracy and mathematical foundations in latter years are to be built:

- how to address barriers to learning;
- how to introduce numeracy concepts in practical, hands-on activities;
- how to provide Grade R learners with a variety of educational toys and equipment in and outside the classroom;
- how to provide Grade R learners with an abundance of free-choice and free-play activities, in which numeracy concepts can be experienced, explored and discovered;
- how to plan, organise and manage classroom activities that will enhance numeracy development among young learners;
- how to provide a classroom which caters to the principles of the four learning theories, as identified in Chapter 4;
- how to provide a learning environment that is learner-centred and learner-paced;
- how to go beyond the minimum requirements of the milestones;
- how to ask open-ended questions which appeal to learners' creative thinking, reasoning and problem-solving skills;
- how to plan and implement developmentally appropriate practices;
- how to provide opportunities for learning through play;
- how to enhance learners' problem-solving and thinking skills.

### **7.3 STRENGTHS AND LIMITATIONS OF THIS STUDY**

The strength of this study lies in my use of multiple data collection instruments (three open-ended focus group interviews, nine semi-structured individual interviews and nine videotapes of the daily programme in Grade R classrooms), in order to combine different methods or “ways of looking” to acquire a thorough comprehension of what the experiences and perspectives of Grade R teachers are in implementing numeracy in

their classrooms (Silverman, 2000, p. 177). According to Denzin and Lincoln (2003) the “use of multiple data collection instruments or triangulation”, which “is the display of multiple, refracted realities simultaneously” can be regarded as a substitute to validation (p. 8).

This study is further strengthened by its internal validity. Internal validity implies the

degree to which the interpretations and concepts have *mutual* meaning between the participants and the researcher. The researcher and participants agree on the description or composition of events, especially the meanings of these events (McMillan & Schumacher, 2001, p. 407).

The interview framework, which was compiled by the participants regarding their beliefs, experiences, knowledge and feelings about themes, prohibited me from interfering by manipulating their understanding of the phenomenon. By following the interview framework during the individual interviews, researcher bias was limited and objectivity enhanced. It must be noted that total objectivity within a qualitative interpretive research paradigm is not possible. Stake (1988) emphasises that “Subjectivity is not seen as a failing needing to be eliminated but as an essential element of understanding” (p. 45). As the researcher, I was subjectively involved when I selected the participants for the focus groups and individual interviews. My subjectivity was also evident in my comparisons of the transcripts of the daily activities with the transcripts of the participant’s individual interviews.

This research study is also strengthened by its credibility. Credibility, in preference to the term “internal validity”, can be obtained in research design by means of triangulation (Shenton, 2004, p. 64). In this case, this entailed using the same methodological data collection methods of interviews (for both focus groups and individuals). Multi-method strategies, such as focus group interviews, individual interviews and the audiovisual recording of activities, assisted in providing different

perspectives on the phenomena. The semi-structured individual interviews furnished thick description and a true and honest picture of the phenomenon under scrutiny, whilst the video recordings reflected the phenomena in a specific context and chronology. Credibility was enhanced when the transcripts of the focus group interviews in which the teachers and practitioners participated were given to the semi-structured individual interviewees to be rephrased and probed to ensure “that their words match[ed] what they actually intended” (Shelton, 2004, p. 68).

Reliability of data collection and analysis in this study was secured by ensuring that I captured through the video recordings the “context- and situation-specificity” of each classroom (Cohen et al., 2002, p. 120). According to Cohen et al.

Audio-visual data collection has the capacity for completeness of analysis and comprehensiveness of material, reducing both the dependence on prior interpretations by the researcher and the possibility again of only recording events which happen frequently. (Cohen et al., 2002, p. 313)

By comparing the videotape transcriptions with the interview transcriptions an honest and comprehensive picture was obtained of how Grade R teachers go about teaching numeracy in their classrooms.

In order to avoid violating participants’ privacy and reducing them to mere research objects, I adhered to the following ethical considerations:

- I obtained written permission from the Eastern Cape Department of Education to conduct this research study in the Grahamstown Education District.
- I met with all participants in the focus group and individual interviews and explained the aim of the research study as well as the method of data

collection and analysis. I guaranteed confidentiality and anonymity by undertaking not to identify them in transcripts of the interviews but to refer to them as participant 1, participant 2, etc. I undertook to protect their privacy by restricting access to the video recordings of interviews and classroom activities to myself and my supervisor. I informed the teachers of their right to end their participation at any time if they felt uncomfortable with the research proceedings.

- All participants signed an Informed Consent whereby they acknowledged that they understood their role and involvement in the data collection and analysis procedures. They also confirmed that the above-mentioned ethical issues were discussed with them.
- Letters requesting permission to videotape their children in the daily programme activities were given to parents and their signed, informed consent was obtained (Stake, 1988, p. 57).

However, the biggest strength of this research study is the fact that Grade R teachers and practitioners were given an opportunity to have their voices heard regarding their beliefs, experiences, knowledge and feelings relating to teaching numeracy.

Despite this, a limitation of this research study can be identified in the videotaping of the daily programme in nine Grade R classrooms. Although I used the themes of the interview framework to guide me when I recorded the daily programme activities, data collection errors might have occurred, as my subjectivity and personal perspectives could have clouded my role as a participant-observer, thereby casting doubt on the validity and reliability of the observations. Cohen et al. (2000) emphasise the fact that qualitative collective case studies necessarily have a personal dimension pertaining to the researcher, as he/she cannot be divorced from the participants he/she is studying in depth. The reliability of observation is also enhanced when there are a number of observations, especially if they point to emergent themes or issues (Cohen et al., 2000). Although I tried to minimise the effect of my intrusion into the natural setting of a Grade R teacher and her learners, it must still have had some impact (Cohen et al., 2000). In this research study, the visibility of the audio-visual recording camera (even

if it was set up in such a way as not to be conspicuous) might have had an effect on the learners. I was unknown, a stranger to them, so they might have acted differently from the way that they normally do in the class and school setting.

External validity limits this case study because the sampling was a non-probability convenience and purposeful criterion case sampling. Furthermore, the study is embedded in a naturalistic interpretive research paradigm, which is not intended to produce representative findings that are generalisable (to the wider Grade R population). In using convenience and purposeful case sampling I selected participants “in the full knowledge that [the sample] does not represent the wide population; it simply represents itself” (Cohen et al., 2001, p. 102). Maykut and Morehouse (1994) agree that the focus “is not the generalisation of results, but a deeper understanding of experience from the perspectives of the participants selected for study” (p. 44).

External validity implies to the scope to which findings are generalisable (transferable) across either contexts or populations. It is not anticipated that the findings of a study of this nature will be generalisable across populations, but it is expected that the findings may indicate certain principles that could be generalisable across contexts. In this study, the point of generalisability is not whether the experiences of the teachers in the study could be expected to be the same for other settings. Rather, generalisability refers to possible broad themes that may become possible given a certain education setting and context.

A further limitation is attributable to the fact that resources and references prior to 1995 were not easily available. The curriculum resources from the Transvaal Department of Education, the Department of Education and Training and the Natal Department of Education are not properly referenced as I was only able to source photocopies of such resources from an ex-TED pre-primary school, a township school which hosted a Grade R class, and an ex-subject advisor for pre-primary schools in the Natal Department of Education. These resources were distributed directly to the

schools by the different Education Departments, and sometimes have no date or publishing information.

Another limitation of this study is the status of the current NCS curriculum. It is in transit and such directions and publications regarding the requisites of the CAPS that have come through have not been sufficiently clear. The curriculum requirements of the *CAPS for the Foundation Phase* (South Africa. DoBE, 2010e) exist at this stage only in the form of a draft document.

The findings and broad themes that came to light when the data was analysed can be used not only to enhance Grade R teachers' understanding, knowledge and skills when they teach numeracy, but also to open up future research spaces regarding numeracy.

#### **7.4 IMPLICATIONS FOR FURTHER RESEARCH**

Due to the fact that major curriculum changes are currently being made in order to implement the CAPS (South Africa. DoBE, 2010e) in 2011, it would be important to repeat this research study and to investigate whether the new and/or adapted curriculum is implemented in a way that is learner-centred, developmentally appropriate and takes the holistic development of the learner into account. As was stressed in paragraph 7.2, the numeracy ability of Grade R learners will only improve if Grade R teachers receive extensive training regarding the challenges and needs that were identified in this research study,

Another possible focus for further research is an investigation into what knowledge and skills are required by Grade R teachers to enable them to address barriers to numeracy learning.

In this research study, I did not include any consideration of the role that language plays in mastering numeracy concepts in Grade R. Although a mother tongue or home language approach was preferred in the NCS for Grade R, the *Report of the Task Team for the Review of the Implementation of the National Curriculum Statement* (South Africa. DoBe, 2009) advises that both the Home Language and the First Additional Language, preferably English, be given a high priority and thus allocated 6 and 5 hours per week teaching time in this regard (p. 43). Some Grade R learners are being taught in either the First or Second Additional Language and not their Home Language. It is therefore strongly advised that further research should be done on the role that language plays in the acquisition of numeracy knowledge and skills.

## **7.5 FINAL WORD**

I undertook this study, not only to find possible answers for the underperformance in numeracy of Grade 3 learners, but also to try and understand what Grade R teachers and practitioners are experiencing every day. As a subject advisor, it is important for me to be familiar with the experiences of Grade R teachers and practitioners so that I can be in a position to assist and support them.

This research study has not only broadened my research knowledge and skills, but has enriched me as a person. I was inspired by the Grade R teachers and practitioners that I met, women who go about their everyday teaching with love, passion, dedication and commitment to their young learners, despite the various challenges that they face. This research study was in this regard a humbling experience.

## REFERENCES

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Anghileri, J. (1995). *Children's mathematical thinking in the primary years: Perspectives on children's learning*. London: Cassell.

Bergh, L. (2008). *Reconciling employment creation and childcare services through early childhood development: A comparison of selected models of provision*. Research Report no 77. Retrieved October 21, 2010, from <http://sds.ukzn.ac.za/files/RR77%20Web.pdf>

Berk, L. E., & Winsler, A. (2002). *Scaffolding children's learning: Vygotsky and early childhood education*. Washington, DC: National Association for the Education of Young Children.

Biersteker, L. (2010). *Scaling-up early child development in South Africa: Introducing a Reception Year (Grade R) for children aged five years as the first year of schooling*.

Retrieved October 9, 2010, from

[http://www.brookings.edu/~media/Files/rc/papers/2010/04\\_child\\_development\\_south\\_africa\\_biersteker/04\\_child\\_development\\_south\\_africa\\_biersteker.pdf](http://www.brookings.edu/~media/Files/rc/papers/2010/04_child_development_south_africa_biersteker/04_child_development_south_africa_biersteker.pdf)

- Bodrova, E., & Leong, D. J. (1996). *Tools of the mind: The Vygotskian approach to early childhood education*. Englewood Cliffs, N.J.: Merrill.
- Branscombe, N., Castle, K, Surbeck, E., & Taylor, J. B. (2002). *Early childhood curriculum: A constructivist perspective*. Boston: Houghton Mifflin Company.
- Bridgemohan, R. R. (1996). *An analysis of early childhood development programmes in South Africa*. Unpublished master's thesis, University of South Africa, Pretoria.
- Brualdi, A. C. (1996). *Multiple intelligences: Gardner's theory*. Retrieved September 29, 2010, from <http://www.springhurst.org/articles/MItheory.htm>
- Calitz, E., Swanepoel, E. M., Van Heerden, A., Penning, R., & Excell, L. (1993). *Opvoeding en onderrig in die preprimere skool (Bed Preprim) Enigste studiegids vir OPP451- P OPP401 – D*. Pretoria: Universiteit van Suid-Afrika.
- Campbell, P. F. (1997). Connecting instructional practice to student thinking. In Chambers, D. L. (2002), *Putting research into practice in the elementary grades. Readings from Journals of the National Council of Teachers of Mathematics*. Reston, Virginia: NCTM.
- Chambers, D. L. (1995). Improving instruction by listening to children. In Chambers, D. L. (2002), *Putting research into practice in the elementary grades. Readings from*

*Journals of the National Council of Teachers of Mathematics*. Reston, Virginia:  
NCTM.

Chery, K. (n.d.). *Gardner's theory of multiple intelligences*. Retrieved September 28, 2010,  
from //psychlogy.a.about.com/od/educationalpsychology/ss/multiple-intell.htm

Clements, D. H., & Battista, M. T. (2002). Constructivist learning and teaching. In Chambers,  
D. L., *Putting research into practice in the elementary grades. Readings from Journals  
of the National Council of Teachers of Mathematics*. Reston, Virginia: NCTM.

Cohen, L., Manion, L., & Morrison, K. (2002). *Research methods in education* (5<sup>th</sup> ed.).  
London: RoutledgeFalmer.

Denzin, N. K., & Lincoln, Y. S. (2003). *Strategies of qualitative inquiry* (2<sup>nd</sup> ed.). Thousand  
Oaks: Sage Publications.

Development Bank of Southern Africa. (2009). *Education roadmap focus on the schooling  
system (November 2008)*. Narrative report July 2009. Retrieved October 18, 2010, from  
www.pmg.org.za/files/docs/090819narrativerrep.doc

De Waal, D., Behm, E., Daniel, B., Morris, S., Scholtz, J., & Thompson, M. (1993). *Learning  
through activity: The School Readiness Programme of The Natal Education  
Department*: (N.p.): The Natal Education Department.

De Witt, M. W., & Booysen, M. I. (1994). *Die klein kind in fokus 'n sielkundig-opvoedkundige perspektief*. Pretoria: Acacia Books.

Faber, R., & Van Staden, C. (1997). *The year before school: A year of learning*. Sandton: Heinemann.

*Gardner's multiple intelligences*. (2006). Retrieved September, 28, 2010, from <http://wilderdom.com/personality/L2-4GardnerMultipleIntelligences.html>

Golbeck, S. L. (2002). Instructional models for early childhood education. *Early Childhood and Parenting Collaborativ*. Retrieved October 19, 2010, from <http://ceep.crc.uiuc.edu/ecearchive/digests/2002/golbeck02.pdf>

Grobler, H. M., Calitz, E. M., Van Staden, C. J. S., & Orr, J .P. (1992). *Kurrikulering in preprimere onderwys* [Bed [Preprimer]] Enigste studiegids vir OPP453-RR OPP 403-F. Pretoria: Universiteit van Pretoria.

Grouws, D. A., & Good, T. L. (1989). *Issues in problem-solving instruction*. In Chambers, D. L. (2002), *Putting research into practice in the elementary grades. Readings from Journals of the National Council of Teachers of Mathematics*. Reston, Virginia: NCTM.

- Gurney, J. (1997). *An investigation into children's developing mathematical abilities*. Cape Town: University of Cape Town.
- Hart, C. (1996). *Doing a literature review: Releasing the social science research imagination*. London: Sage Publications.
- Henning, E., Van Rensburg, W., & Smit, B. (2004). *Finding your way in qualitative research*. Pretoria: Van Schaik.
- Hergenhahn, B. R., & Olson, M. H. (2005). *An introduction to theories of learning* (7<sup>th</sup> ed.). New Jersey: Pearson Prentice Hall.
- Hurlock, E. B. (1985). *Child development* (6<sup>th</sup> ed.). Singapore: McGraw-Hill Book Company.
- Hutinger, P. (2001). *Learning modalities: Pathways to effective learning*. Retrieved September 28, 2010, from [http://www.pbs.org/teachers/earlychildhood/articles/learning\\_modalities.html](http://www.pbs.org/teachers/earlychildhood/articles/learning_modalities.html)
- Isaacman, J. (1996). *Understanding the National Qualifications Framework: A guide to lifelong learning*. Pietermaritzburg: Interpak Books.

- Ishmail, M. I. (2004). *The impact of curriculum transformation on classroom practice in Northern Cape schools*. Retrieved October 18, 2010, from <http://etd.uovs.ac.za/ETD-db/theses/available/etd-07052005-134645/unrestricted/ISHMAILMI.pdf>
- Jackson, G. (2003). *A comparative case study of the strategies used by grade one teachers who teach through the medium of English*. Unpublished master's thesis, Rhodes University, Grahamstown.
- Jewison, R. (2008). *The National Qualifications Framework issues in education*. Policy Number 1. Johannesburg: Centre for Education Policy Development.
- Jones, B. J. (2005). Play in early childhood. In Maynard, T. & Thomas, N., *An introduction to early childhood studies*. London: Sage Publications.
- Kazemi, E. (1998). Discourse that promotes conceptual understanding. In Chambers, D. L. (2002), *Putting research into practice in the elementary grades. Readings from Journals of the National Council of Teachers of Mathematics*. Reston, Virginia: NCTM.
- Kirov A., & Bhargava, A. (2002). Learning to guide preschool children's mathematical understanding: A teacher's professional growth. *Early Childhood Research & Practice*, 4(1). Retrieved October 18, 2010, from <http://ecrp.uiuc.edu/v4n1/kirova.html>

Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. London: Sage Publications.

Larochelle, M., & Bednarz, N. (1998). Constructivism and education: Beyond epistemological correctness. In Larochelle, M., Bednarz, N. & Garrison, J., *Constructivism and education*. Cambridge: Cambridge University Press.

Lewis, F., Nyaashe, V. H., & Hartley, Z. (2008). *Reflections on the Human Capital Development Strategy (HCDS)*. The third series of conceptual papers supporting the implementation of the HCDS. Retrieved October 21, 2010, from [http://wced.school.za/home/projects/hcgs/strategy/documents/Reflections\\_3.pdf](http://wced.school.za/home/projects/hcgs/strategy/documents/Reflections_3.pdf)

Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. Beverly Hills: Sage.

Lindberg, L., & Swedlow, R. (1985). *Young children exploring and learning*. Boston: Allyn and Bacon.

Loef, M. M., Carey, D. A., Carpenter, T. P., & Fennema, E. (1988). *Integrating assessment and instruction*. In Chambers, D. L. (2002), *Putting research into practice in the elementary grades. Readings from Journals of the National Council of Teachers of Mathematics*. Reston, Virginia: NCTM.

Matthae, S. (2010). *Early childhood – learning styles*. Retrieved September 27, 2010, from <http://www.examiner.com/early-childhood-education-in-fort-lauderdale/multiple-intel>

Maykut, P., & Morehouse, R. (1994). *Beginning qualitative research: A philosophical and practical guide*. London: RoutledgeFalmer.

McMillan, J. H., & Schumacher, S., (2001). *Research in education: A conceptual introduction* (5<sup>th</sup> ed.). New York: Addison Wesley Longman.

Morrison, G. S. (1991). *Early childhood education today* (5<sup>th</sup> ed.). New York: Merrill Publishing Company.

*Multiple intelligences*. (n.d.). Retrieved September 28, 2010, from <http://ace.schoolnet.org.za/cd/ukzncore2b/documents/core2b.intelligence.htm>

Neuman, W. L. (1997). *Social research methods qualitative and quantitative approaches* (3<sup>rd</sup> ed.). Boston: Allyn and Bacon.

Northcutt, N., & McCoy, D. (2004). *Interactive qualitative analysis: A systems method for qualitative research*. London: Sage.

Padayachie, R., Atmore, E., Biersteker, L., King, R., Matube, J., Muthayan, S., et al. (1994). *Report of the South African Study on Early Childhood Development. Recommendations*

*for action in support of young children.* Johannesburg: The Centre for Education Policy Development.

Pritchard, A. (2005). *Ways of learning: Learning theories and learning styles in the classroom.* New York: David Fulton Publishers.

Riordan-Karlsson, M. (2000). *Constructivism.* Westminster: Teacher Created Materials.

Rossman, G. B., & Rallis, S. F. (2003). *Learning in the field: An introduction to qualitative research* (2<sup>nd</sup> ed.). London: Sage Publications.

Sandberg, A., & Samuelsson, I. P. (2003). Preschool teachers' play experiences then and now. *Early Childhood Research & Practice, 5*(1). Retrieved October 28, 2010, from <http://ecrp.uiuc.edu/v5n1/sandberg.html>

Sawyer, A. E. (1995). *Developments in elementary mathematics teaching.* Portsmouth, NH: Heinemann.

Schunk, D. H. (2008). *Learning theories: An education perspective* (5<sup>th</sup> ed.). New Jersey: Pearson Merrill Prentice Hall.

Schwartz, J. E., & Riedesel, C. A. (1994). *Essentials of classroom teaching: Elementary mathematics.* Boston: Allyn & Bacon.

Schwebel, M., & Raph, J. (Ed.). (1974). *Piaget in the classroom*. London: Routledge & Kegan Paul.

Sheffield, L. J., & Cruikshank, D. E. (2000). *Teaching and learning elementary and middle school mathematics* (4<sup>th</sup> ed.). New York: John Wiley.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*. Retrieved October 21, 2010, from [http://www.angelfire.com/theforce/shu\\_cohort\\_viii/images/Trustworthypaper.pdf](http://www.angelfire.com/theforce/shu_cohort_viii/images/Trustworthypaper.pdf)

Shonkoff, J. P., & Meisels, S. J. (2000). *Handbook of early childhood intervention* (2<sup>nd</sup> ed.). Cambridge: Cambridge University Press.

Silver, E. A., & Smith, M. S. (1990). Teaching mathematics and thinking. In Chambers, D. L. (2002), *Putting research into practice in the elementary grades. Readings from Journals of the National Council of Teachers of Mathematics*. Reston, Virginia: NCTM.

Silverman, D. (2000). *Doing qualitative research*. London: Sage Publications.

Smith, M. K. (2008). 'Howard Gardner and multiple intelligences'. *The encyclopedia of informal education*. Retrieved September 27, 2010, from <http://www/infed.org/thinkers/gardner.htm>

Smith, S. S. (2001). *Early childhood mathematics*. Boston: Allyn & Bacon.

South Africa. Department of Basic Education. (2008a). *Address by the Minister of Education, Naledi Pandor MP, at the launch of the Foundations for Learning Campaign, Cape Town 18 March 2008*. Retrieved October 9, 2010, from <http://www.education.gov.za/dynamic/dynamic.aspx?pageid=306&id=7425>

South Africa. Department of Basic Education. (2008b). *Address by the Minister of Education, Naledi Pandor MP, at the Foundation Phase Conference, 30 September 2008*. Retrieved October 9, 2010, from <http://www.education.gov.za/dynamic/dynamic.aspx?pageid=306&id=8039>

South Africa. Department of Basic Education. (2008c). *2007 Grade 3 SE leaflet*. Retrieved October 7, 2010, from <http://www.education.gov.za/dynamic/dynamic.aspx?pageid=326&dirid=56>

South Africa. Department of Basic Education. (2010a). *Foundations for learning assessment framework Grade R*. Pretoria: Department of Basic Education.

South Africa. Department of Basic Education. (2010b). *Curriculum news: Improving the quality of learning and teaching, planning for 2010 and beyond*. Pretoria: The Department.

South Africa. Department of Basic Education. (2010c). *Curriculum news: Improving the quality of learning and teaching*. Pretoria: The Department.

South Africa. Department of Basic Education (2010d). *Statement by the Minister of Basic Education, Mrs Angie Motshekga, MP on the progress of the review of the National Curriculum Statement, Tuesday 06 July 2010*. Retrieved October 20, 2010, from <http://docs.google.com/viewer?a=v&q=cache:Ji4ryyo4JV4J:www.education.gov.za/content/documents/statement%2520on%2520Curriculum%2520%2520progress%252006%2520Jul%25202010.pdf>

South Africa. Department of Basic Education. (2010e). *Curriculum and Assessment Policy Statement (CAPS) Mathematics – Foundation Phase (Grade R) Final draft*. Retrieved October 18, 2010, from <http://www.education.gov.za/CAPS/Grade%20R%20Maths.pdf>

South Africa. Department of Basic Education. (2010f). *Curriculum and Assessment Policy Statement (CAPS) Mathematics – Foundation Phase Final draft*. Retrieved October 20, 2010, from <http://www.education.gov.za/CAPS/Grades%201%20to%203.pdf>

South Africa. Department of Education. (1983). *White Paper on the Provision of Education in South Africa*. Pretoria: Government Printer.

South Africa. Department of Education. (1995). *White Paper on Education and Training*. Pretoria: The Department.

South Africa. Department of Education. (1996a). *Interim Policy for Early Childhood Development*. Pretoria: The Department.

South Africa. Department of Education. (1996b). *South African Schools Act*. Number 84 of 1996. Pretoria: The Department.

South Africa. Department of Education. (1997a). *Curriculum 2005: Lifelong learning for the 21<sup>st</sup> century*. Pretoria: CPT Books.

South Africa. Department of Education. (1997b). *Statement of the National Curriculum for Grades R-9*. Pretoria: The Department.

South Africa. Department of Education. (1997c). *Foundation Phase (Grades R to 3) Learning programme document: Numeracy*. Pretoria: The Department.

South Africa. Department of Education. (1997d). *Foundation Phase (Grades R to 3) Policy document*. Pretoria: Government Printer.

South Africa. Department of Education. (1997e). *Foundation Phase (Grades R to 3) Learning programme document: Literacy*. Pretoria: The Department.

South Africa. Department of Education. (1997f). *Foundation Phase (Grades R to 3) Learning programme document: Life Skills*. Pretoria: The Department.

South Africa. Department of Education. (1998). *Assessment Policy in the General Education and Training Band Grade R to 9 and ABET*. Pretoria: The Department.

South Africa. Department of Education. (2001). *Education White Paper 5 on Early Childhood Education: Meeting the Challenge of Early Childhood Development in South Africa*. Pretoria: The Government Printer.

South Africa. Department of Education. (2002a). *Revised National Curriculum Statement Grades R-9 (Schools) Policy: Mathematics*. Pretoria: The Government Printer.

South Africa. Department of Education. (2002b). *Revised National Curriculum Statement Grades R-9 (Schools) Policy overview*. Pretoria: The Government Printer.

South Africa. Department of Education. (2003a). *Systemic Evaluation Foundation Phase Mainstream National Report*. Pretoria: The Department.

South Africa. Department of Education. (2003b). *Revised National Curriculum Statement Grades R-9 (Schools). Teacher's Guide for the Development of Learning Programmes: Foundation Phase*. Pretoria: The Government Printer.

South Africa. Department of Education. (2003c). *Revised National Curriculum Statement Grades R-9 (Schools). Teacher's Guide for the Development of Learning Programmes: Mathematics*. Pretoria: The Government Printer.

South Africa. Department of Education. (2005). *The National Protocol on Assessment for Schools in the General and Further Education and Training Band (Grades R-12)*. Pretoria: The Department.

South Africa. Department of Education. (2007). *The National Policy Framework for Teacher Education and Development in South Africa. "More teachers; Better teachers"*. Pretoria: The Government Printer.

South Africa. Department of Education. (2008a). *Grade R practical ideas*. Pretoria: Department of Education.

South Africa. Department of Education. (2008b). *Foundations for Learning Campaign: Laying solid foundations*. Pretoria: The Government Printer.

South Africa. Department of Education. (2008c). *Foundations for Learning Assessment Framework: Foundation Phase*. Pretoria: The Department.

South Africa. Department of Education. (2008d). *The National Certificates (Vocational) Subject Guidelines for Early Childhood Development NQF Level 4*. Pretoria: The Government Printer.

South Africa. Department of Education. (2009). *Report of the Task Team for the Review of the Implementation of the National Curriculum Statement*. Retrieved October 9, 2010, from [http://docs.google.com/viewer?a=v&q=cache:\\_9T6Drnfco8J:www.info.gov.za/view/DownloadFileAction%3Fid%3D123634](http://docs.google.com/viewer?a=v&q=cache:_9T6Drnfco8J:www.info.gov.za/view/DownloadFileAction%3Fid%3D123634)

South Africa. Department of Education and Training. (n.d.). *Structured activities*. Unpublished document.

South Africa. Eastern Cape Department of Education. (2002). *Grade 3 Systemic 2001 Mainstream report*. Pretoria: Department of Education Chief Directorate: Quality Assurance.

South Africa. Eastern Cape Department of Education. (2003a). *Literacy Learning Programme Module 2. Teacher's Orientation Course. Exploring the RNCS in Foundation Phase (Grades R-3)*. East London: Harry's Printers.

South Africa. Eastern Cape Department of Education. (2003b). *Numeracy Learning Programme Module 3. Teacher's Orientation Course. Exploring the RNCS in Foundation Phase (Grades R-3)*. East London: Harry's Printers.

South Africa. Eastern Cape Department of Education. (2003c). *Life Skills Learning Programme Module 4. Teacher's Orientation Course. Exploring the RNCS in Foundation Phase (Grades R-3)*. East London: Harry's Printers.

South Africa. Eastern Cape Department of Education. (2005a). *A Teacher's INSET Programme for Foundation Phase (Grades R-3). Supporting the RNCS in the Foundation Phase (Grades R-3). Planning*. East London: Harry's Printers.

South Africa. Eastern Cape Department of Education. (2005b). *A Teacher's INSET Programme for Foundation Phase (Grades R-3). Supporting the RNCS in the Foundation Phase (Grades R-3). Assessment, recording and reporting*. East London: Harry's Printers.

- South Africa. Eastern Cape Department of Education. (2008a). *The Evaluation of the Accredited Training of Early Childhood Development Practitioners. Baseline study: Quality of Teaching and Learning in Grade R*. East London: Quality Promotion and Standards Directorate.
- South Africa. Eastern Cape Department of Education. (2008b). *Grade R Guideline Document*. East London: Gemprint.
- South Africa. Eastern Cape Department of Education. (2009). *Grade R Curriculum Guideline for Principals, SMT's, Foundation Phase Section Heads. Document*. Unpublished document.
- South Africa. Education Labour Relations Council. (2003). *Policy Handbook for Educators*. ELRC: Universal Print Group.
- South Africa. Department of Government Communications and Information System. (n.d.). *South Africa Yearbook 2007/08 Education*. Retrieved October 21, 2010, from [http://www.gcis.gov.za/resource\\_centre/sa\\_info/yearbook/2008/chapter7.pdf](http://www.gcis.gov.za/resource_centre/sa_info/yearbook/2008/chapter7.pdf)
- South Africa. KwaZulu-Natal Department of Education and Culture. (n.d.). *In-service training programme for Grade R educators Module One* (2<sup>nd</sup> ed.). Ulundi: Kzn Dec.

South Africa. KwaZulu-Natal Department of Education and Culture. (n.d.). *In-service training programme for Grade R teachers Module Two* (2<sup>nd</sup> ed.). Ulundi: Kzn Dec.

South Africa. KwaZulu-Natal Department of Education and Culture. (n.d.). *In-service training programme for Grade R teachers Module Three*. Ulundi: Kzn Dec.

Stake, R. E. (1995). *The art of case study research*. London: Sage Publications.

Stigler, J. W. (1988). The use of verbal explanation in Japanese and American classrooms. In

Chambers, D. L. (2002), *Putting research into practice in the elementary grades*.

*Readings from Journals of the National Council of Teachers of Mathematics*. Reston,

Virginia: NCTM.

Sutherland, P. (1992). *Cognitive development today: Piaget and his critics*. London: Paul

Chapman Publishing.

Thomas, D. (1991). *Children, teachers and mathematics*. Boston: Allyn & Bacon.

Thyer, D., & Maggs, J. (1994). *Teaching mathematics to young children* (3<sup>rd</sup> ed.). London:

Cassell Education Limited.

- Transvaalse Onderwysdepartement. (1992a). Bewegingsaktiwiteite in die Preprimêre Skool  
Lesing 5. In Wilkens & Van der Merwe (no initials supplied), *Die  
Kleuterskoolprogram*. Pretoria: Die Transvaalse Onderwysdepartement.
- Transvaalse Onderwysdepartement. (1992b). Perseptuele aktiwiteite in die Preprimêre Skool  
Lesing 6. In Wilkens & Van der Merwe (No initials supplied), *Die  
Kleuterskoolprogram*. Pretoria: Die Transvaalse Onderwysdepartement.
- Transvaalse Onderwysdepartement. (1992c), Kunsaktiwiteite in die Preprimêre Skool Lesing 7.  
In Wilkens & Van der Merwe (No initials supplied), *Die Kleuterskoolprogram*.  
Pretoria: Die Transvaalse Onderwysdepartement.
- Transvaalse Onderwysdepartement. (1992d). Bak- en brou-aktiwiteite in die Preprimêre Skool  
Lesing 8. In Wilkens & Van der Merwe (No initials supplied), *Die  
Kleuterskoolprogram*. Pretoria: Die Transvaalse Onderwysdepartement.
- Troutman, A. P., & Lichtenberg, B. K. (2003). *Mathematics: A good beginning* (6<sup>th</sup> ed.).  
Belmont: Wadsworth Cengage Learning.
- Van der Merwe, K. (1988a). *Learning through play*. Cape Town: Early Learning Resource  
Unit.

- Van der Merwe, K. (1988b). *How children develop and learn*. Cape Town: Early Learning Resource Unit.
- Van der Merwe, K. (1988c). *Learning together*. Cape Town: Early Learning Resource Unit.
- Wilkens, & Van der Merwe, (No initials supplied). (1992). *Die Kleuterskoolprogram*. Pretoria: Transvaalse Onderwysdepartment.
- Van Rensburg, C. J. J., Kilian, C. J. G., & Landman, W. A. (1981). *Notes on fundamental-pedagogic concepts – An introductory orientation*. Pretoria: N.G. Kerkboekhandel, Transvaal.
- Wolcott, H. F. (2001). *Writing up qualitative research* (2<sup>nd</sup> ed.). London: Sage Publications.
- Yackel, E., Cobb, P., Wood, T., & Merkel, G. (1990). Experience, problem solving, and discourse as central aspects of constructivism. In Chambers, D. L. (2002), *Putting research into practice in the elementary grades. Readings from Journals of the National Council of Teachers of Mathematics*. Reston, Virginia: NCTM.
- Yin, R. K. (1994). *Case study research: Design and methods*. Thousand Oaks, CA: Sage.

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**An Investigation into Grade R Teachers' Experiences of  
Implementing Numeracy in Grade R**

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**Volume 2: Appendices**

ELNA BARNARD

Submitted in fulfilment of the academic requirements for the degree of Doctor of Philosophy,  
in the Department of Education, Rhodes University

Supervisor: Professor M Schäfer

Grahamstown

April 2011

## DECLARATION

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I declare that "An Investigation into Grade R Teachers' Experiences of Implementing Numeracy in Grade R" is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

.....  
KR

**E BARNARD**

.....  
April 2011

**DATE:**

## APPENDIX A

|   |
|---|
| <b>INFORMED CONSENT – UNSTRUCTURED OPEN-ENDED FOCUS GROUP INTERVIEW</b> |
|---|

**TITLE OF THE RESEARCH PROJECT:**

AN INVESTIGATION INTO GRADE R TEACHERS' EXPERIENCES OF IMPLEMENTING  
NUMERACY IN GRADE R

I .....[Participant's name] declare herewith that I hereby  
accept to be a participant in this research. I also declare herewith that I understand that:

- this research project is aimed at exploring, describing and understanding the experiences of teachers in supporting the development of Numeracy in Grade R year classes;
- my participation in this research project is voluntary and confidential;
- my role as participant in the unstructured open-ended focus group interview will entail that I will participate in brain-storming activities;
- a sound recording will be made of above-mentioned data collection activities in order to give an honest and true reflection of what has transpired during the focus group interactions;
- my identity as a participant will not be revealed and I will only be referred to as Participant in the sound recording;
- an audio-video tape will also be made of this focus group activity, but once again my identity will not be revealed as the video tape will focus on the facilitation skills of the researcher and any identification of a participant will be blurred and out of focus.

Participant's signature: ..... Date:

Researcher's signature: ..... Date:

## APPENDIX B

|  |
|--|
| <b>INFORMED CONSENT - SEMI-STRUCTURED INDIVIDUAL INTERVIEW</b> |
|--|

### TITLE OF THE RESEARCH PROJECT:

AN INVESTIGATION INTO GRADE R TEACHERS' EXPERIENCES OF IMPLEMENTING  
NUMERACY IN GRADE R

I .....[Participant's name] declare herewith that I hereby  
accept to be a participant in this research. I also declare herewith that I understand that:

- this research project is aimed at exploring, describing and understanding the experiences of teachers in supporting the development of Numeracy in Grade R year classes;
- my participation in this research project is voluntary and confidential;
- my role as participant in the individual interview will entail that I will discuss the Interview Framework;
- a sound recording will be made of above-mentioned data collection activities in order to give an honest and true reflection of what has transpired during the individual interview interactions;
- my identity as a participant will not be revealed and I will only be referred to as Participant Number 1,2 or 3 in the sound recording;
- an audio-video tape will also be made of the daily programme of the Grade R activities, which will be used to record observations of the numeracy activities.

Participant's signature: ..... Date:

Researcher's signature: ..... Date:

## APPENDIX C

|   |
|---|
| <b>INFORMED CONSENT - PARENT'S CONSENT FOR LEARNER TO PARTICIPATE IN THE<br/>AUDIO-VIDEO TAPING OF GRADE R ACTIVITIES</b> |
|---|

### **TITLE OF THE RESEARCH PROJECT:**

AN INVESTIGATION INTO GRADE R TEACHERS' EXPERIENCES OF IMPLEMENTING  
NUMERACY IN GRADE R

I ..... [Name of parent/guardian of .....  
Learner's name] declare herewith that I hereby give permission that my child participates in the  
audio-video taping of Grade R activities which will be filmed on ..... I declare herewith  
that I understand that:

- The audio-video taping of above-mentioned Grade R activities will only be used for recording and observation purposes in this research project.
- this research project is aimed at exploring, describing and understanding the experiences of teachers in supporting the development of Numeracy in Grade R year classes;

Parent/guardian's signature: .....Date:

Researcher's signature: ..... Date:

## APPENDIX D

### TRANSCRIPTION OF PILOT FOCUS GROUP INTERVIEW:1

[P - Participant, R - Researcher]

| P/R | Line | Discussion   |
|-----|------|--|
| R   | 1    | Thank you for being here and giving up your time but especially I    |
|     | 2    | want to thank you for sharing. Sharing your knowledge, your          |
|     | 3    | expertise, your feelings, your beliefs with me today. As you know    |
|     | 4    | the research is about how teachers experience numeracy in the        |
|     | 5    | classroom. This is what it is basically about. Before we go there    |
|     | 6    | I just first want to point out some stuff to you. At any time during |
|     | 7    | this research process, if you feel uncomfortable or do you not want  |
|     | 8    | to participate anymore, you've got the right to stand up and go.     |
|     | 9    | The other thing also, due to the fact that we are making an audio    |
|     | 10   | video tape, in order to hear what you are saying, but more           |
|     | 11   | specifically to focus on the way I facilitate this process and how   |
|     | 12   | this process is going to unfold, we need to have an audio tape.      |
|     | 13   | Nowhere in this video tape will you be identified. Where I type      |
|     | 14   | over what you have said I will not refer to you on your names but    |
|     | 15   | will refer to you as participant 1, 2, or 3, or 6. This video tape   |
|     | 16   | at this stage, will only be available between myself and my          |
|     | 17   | supervisor. As I said, for him to have a knowledge of how this       |

|    |    |   |
|----|----|---|
|    | 18 | process unfold. Ehm. May I therefore ask for your permission to     |
|    | 19 | have this video tape and audio tape?                                |
| Ps | 20 | All participants nodded their heads in agreement.                   |
| R  | 21 | Thanks. Goed. And what we are basically going to do, I am going     |
|    | 22 | to give you some statements you are going to write it on the        |
|    | 23 | cards silently, then we are going to put it on the walls and then I |
|    | 24 | will take you through the process step by step.                     |
|    | 25 | Everybody is comfortable?.  |
|    | 26 | Pause   |
| R  | 27 | But before we start writing anything or what else, I first want you |
|    | 28 | to relax, close your eyes, and just think about your day today.     |
|    | 29 | From the moment you went came to school into your classroom.        |
|    | 30 | See yourself in the classroom. See how your class looks.            |
|    | 31 | How you set it up. How does your numeracy corner look like.         |
|    | 32 | The kids are coming to the school. The day has started. You         |
|    | 33 | are busy with your activities. You see how it unfolds. Especially   |
|    | 34 | your numeracy activities, what have you put out, what have          |
|    | 35 | you planned for today? Reflect on how the kids are engaging         |
|    | 36 | in these activities.  |
|    | 37 | Pause   |
| R  | 38 | Ok. Now I want you to think about what I am going to ask you        |
| R  | 39 | now to do. I'm first going to give you one statement and then you   |

|    |  |   |
|----|--|---|
| R  | 40   | think about it based on this reflection you had of your class. Tell |
|    | 41   | me what you think or feel or call to mind when I use the term       |
|    | 42   | Numeracy. Silently, write it on your card. As many as possible      |
|    | 43   | Tell me what you think or feel or call to mind when you use the     |
|    | 44   | term Numeracy.  |
|    | 45   | [some background comment – not clearly heard for the transcription] |
|    | 46   | One verb or one sentence, one idea on a card. Please write          |
|    | 47   | as many cards as possible. Just one thing per card.                 |
|    | 48   | Yes, just one thing. It can be anything, It can even be a phrase.   |
|    | 49   | Or a sentence or a word or a concept or a feeling. Reflect, think,  |
|    | 50   | share your experiences in implementing numeracy in your             |
|    | 51   | classroom.  |
|    | 52   | Tell me about your experiences in implementing numeracy in your     |
|    | 53   | classroom. What you feel what you experience, what you think        |
|    | 54   | about, what you believe about. Anything that comes to mind that     |
|    | 55   | you think about, when you do implementing or when you               |
|    | 56   | reflect about implementation of numeracy in your classroom.         |
|    | 57   | You must now write again for me on the cards on this statement.     |
|    | 58   | Tell me about your experiences when you implement numeracy in       |
|    | 59   | your classroom  |
|    | 60   | [some background comment – not clearly heard for the transcription] |
| 61 | How do you feel about it when you do it in your daily programme? |   |

|   |    |   |
|---|----|---|
|   | 62 | Just go on, it doesn't matter if it gets mixed up with the other cards                                |
|   | 63 | it is also fine. On attending numeracy in-service training sessions                                   |
|   | 64 | it can be anywhere, wherever you had training on numeracy   |
|   | 65 | in implementing numeracy. It can be when you were trained as  |
|   | 66 | an ECD practitioner. It can, it could have been when you were   |
|   | 67 | trained as ehm, a Gr R teacher. It could have been courses you  |
|   | 68 | attended. Either by social development either by NGO or by  |
|   | 69 | either department. Anything. Whatever. Tell me just about   |
|   | 70 | your experiences of attending numeracy training. Wherever   |
|   | 71 | you heard about numeracy. How did you feel about it when they   |
|   | 72 | told you about it? How did you feel when you went and implement                                       |
|   | 73 | it? What did you believe about it? What are your feelings about it?                                   |
|   | 74 | Write your cards in silence.  |
|   | 75 | What I want now to do, is I am going to give you each prestik.  |
|   | 76 | And Participant 1 and 1, I am going to ask you just to move over                                      |
|   | 77 | here. Everybody puts up their cards randomly at the wall. Please.                                     |
|   | 78 | Ja, thank you so much. I just give you this, then you can start picking up there ... You can start... |
|   | 79 | [Participants put their cards on the wall - Background movement and noise]                            |
| R | 80 | Ok shall we start then? I am going to read every card. And  |
|   | 81 | if you are not sure, some will go quicker and if you don't  |
|   | 82 | understand or differ or needs more clarification you must please                                      |

|   |     |   |
|---|-----|---|
|   | 83  | say so. So any one may answer anything on these cards. It is no   |
|   | 84  | more the wall, it belongs to all of us now. OK. The first one   |
|   | 85  | your own individual card which you wrote, you write.. When you  |
|   | 86  | put it on I want to talk about is excited. The word excited. What   |
|   | 87  | do you think it means? Can I get some input from you people?  |
| P | 88  | Enjoy, Enjoyment.   |
| R | 89  | Enjoyment? OK. Confused?  |
| P | 90  | Not sure.   |
| R | 91  | Not sure. Few?  |
| P | 92  | I think it's ...  |
| R | 93  | Laughter. Little né? Not enough. Less?. How can we define it?   |
| P | 94  | More or less.   |
| R | 95  | More or less. Comparisons?  |
| P | 96  | The difference is if you can count something you say few or many. If you can't, like salt or sand it is less or more. |
| R | 97  | Ok.   |
| P | 98  | And if it is something you can count you use the word few or  |
|   | 99  | many.   |
| R | 100 | Ok, thank you. Comparisons ?  |
| P | 101 | [mutter, ununderstandable]  |
| R | 102 | Compare?  |
| P | 103 | Compare   |

|   |     |   |
|---|-----|---|
| R | 104 | And quantity means?   |
| P | 105 | the volume.   |
| R | 106 | The volume or measurement actually né? Numbers?                     |
| P | 107 | Counting. Symbols.  |
| R | 108 | It can be counting, it can be symbols. Ok. Eager?                   |
| P | 109 | Enthusiastic.   |
| R | 110 | Ok. Counting I think is self-explanatory. Many as explained.        |
|   | 111 | More or the same. Seriation?  |
|   | 112 | [background mutter, cannot make out]                                |
| R | 113 | Sequence. In sequence né? Size again got to do                      |
|   | 114 | with volume, measurement. I asked a lot of questions and            |
|   | 115 | I was afraid of how I am going to do it. I think that explains      |
|   | 116 | how that person is feeling. Need to prepare them? Give me           |
|   | 117 | some background. Prepare what?                                      |
| P | 118 | Learners, activities.   |
| R | 119 | Activities, plans. Feel they love rote learning? Touching, feeling. |
|   | 120 | Ok. Think my learners have a numeracy background + unaware?         |
| P | 121 | The learners come to school with a certain knowledge.               |
| R | 122 | Prior knowledge?  |
| P | 123 | They are not aware they ...   |
| R | 124 | Ok. Counting games? It can be anything né. It can be a              |
|   | 125 | singing game, it can be a rhyme game. Cups different sizes?         |

|     |   |   |
|-----|---|---|
|     | 126   | It is again measurement.  |
| P   | 127   | Measurement.  |
| R   | 128   | I felt miserable at my first workshop? I think we understand      |
|     | 129   | that one. I involve myself in activities with other Grade R       |
|     | 130   | educators to gain insight? We are surrounded with numeracy?       |
|     | 131   | Accidental reading/doing numeracy? Also shapes?                   |
|     | 132   | Then threading beads? Concepts? Do we all understand what         |
|     | 133   | we mean by concepts? The different numeracy concepts              |
|     | 134   | we've got. Rough smooth, large small. I never figure out          |
|     | 135   | how I am going to implement it then? Confusion there,             |
|     | 136   | uncertainty. I then solve some problems with mathematical skills? |
|     | 137   | Again numbers. Colours? Puzzles? Is that puzzles uhm, games,      |
|     | 138   | puzzle toys, educational toys? Or, just give me some background   |
| 139 | more on that puzzle. Can it be any puzzles? |   |
| Ps  | 140   | It can be number puzzles.   |
| R   | 141   | Number puzzles. Ok.   |
| PS  | 142   | It can be any puzzles.  |
| R   | 143   | It can be any puzzles. Ok. Geostats? Does everybody know          |
|     | 144   | what geostats is? Geostats is an educational toy that you stack   |
|     | 145   | different sizes into. I believe it will lead the young ones       |
|     | 146   | to greener pasture?   |
| PS  | 147   | I believe it will lead the young ones to greener pastures. It is  |

|    |     |  |
|----|-----|--|
|    | 148 | something that is going to develop them.                           |
| R  | 149 | Ok, gain something né? Ok Then counting, figures, numbers,         |
|    | 150 | geostacks, shapes, size, counting objects, thinking? Ok Games.     |
|    | 151 | Problem solving. Measurement. Involvement. Learners think          |
|    | 152 | for themselves. Rhymes. Numeracy involve learners more             |
|    | 153 | than the educator. Enjoyment. Back to front numbers. Ok. Do        |
|    | 154 | you all understand what we mean by back to front numbers?          |
| Ps | 155 | Reversal?  |
| R  | 156 | Reversal. Ok, It can be reversal. What about if you count          |
|    | 157 | backwards? It can also be reversal, as I understand it. It can be  |
|    | 158 | reversal when we turn the nine to the 6, upside down, So it is     |
|    | 159 | going to be a remedial problem. Or it can be counting              |
|    | 160 | backwards... How to present activities to learners? Uhm, Learner   |
|    | 161 | participation? Solve problems? Must plan activities?               |
|    | 162 | Counting songs. Also to make your own resources. Is fun.           |
|    | 163 | Children enjoy it. It is important for learners. Workshops were    |
|    | 164 | always interested and fun. Dramatize rhymes. Games.                |
|    | 165 | Sorting. Counting. Numbers. Colours. Shapes. Should not            |
|    | 166 | be leaving out stages eg. Abstract too soon. Do you understand     |
|    | 167 | here... that we do not, we must always remember where the          |
|    | 168 | learners are coming from. What is his potential? What is he,       |
|    | 169 | according to his, uhm, developmental stage. A three year old child |

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|----|-----|--|
|    | 170 | can not do multiplication sums. Ok, Positive? Use creative         |
|    | 171 | thinking? Workbooks formal – careful? Correct atmosphere.          |
|    | 172 | Relax. Important. Learners learn new ideas. The time of day        |
|    | 173 | important. Blockages to learning. See wider picture. Positive      |
|    | 174 | interaction. Atmosphere position? Ok? Atmosphere positive,         |
|    | 175 | sorry. Important to develop as a person and citizen. Learned       |
|    | 176 | about resources and how to use it. Open to learning. Positive      |
|    | 177 | self-esteem. Excited. Positive participation. Change to build      |
|    | 178 | relations. Concrete experience. Number concept. Counting.          |
|    | 179 | More or less. Prepositions. Numbers. Practical counting. Shapes    |
|    | 180 | and sizes. Colours different by putting together the matching      |
|    | 181 | objects and count them.. Days of the week. How many month in       |
| R  | 182 | the year? The learners must use their fingers to learn them one by |
|    | 183 | one. I feel that learners learn best when doing it practical. Some |
|    | 184 | learn through rhymes. Using learners themselves by counting        |
|    | 185 | how many in small groups. Using months in a year by naming         |
|    | 186 | them. I feel that it is very important to teach learners to count  |
|    | 187 | using days of the week. All these cards, are there any confusion?  |
|    | 188 | Does everyone understand what is being said here?                  |
| PS | 189 | Yes.   |
| R  | 190 | Ok. Is there anyone, based on what we have just read now, that     |
|    | 191 | wants to add anything more?  |

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|----|-----|---|
| Ps | 192 | Can you read your questions again?                                |
| R  | 193 | Would you like my questions again? Uhm, the statements.           |
| Ps | 194 | Was that for all of them? Or just the one?                        |
| R  | 195 | Eventually, it goes for all of them. The first statement:         |
|    | 196 | Tell me about your experiences of attending numeracy in-service   |
|    | 197 | training sessions. Tell me about your experiences in implementing |
|    | 198 | numeracy in your classroom. And tell me what you think of feel or |
|    | 199 | call to mind when I use the term numeracy.                        |
| Ps | 200 | Is all these words coming to that statement?                      |
| R  | 201 | All three statements can cover anyone. Does anyone want to        |
|    | 202 | add more to this?   |
|    | 203 | Put them up. All of them. Contributions. Counting. Concrete.      |
|    | 204 | Repetition. Enlightning. Does everybody understand what we        |
|    | 205 | are trying to say with enlightning?                               |
|    | 206 |   |
| Ps | 207 | Regarding the ...in-service training.                             |
| R  | 208 | Ok, but what does enlightning...Empowering, is that another       |
|    | 209 | word?   |
| P  | 210 | Yes.  |
| R  | 211 | Opening up learning. In Afrikaans we've got the word leersaam.    |
|    | 212 | I don't know what the English is and in Xhosa I really don't      |
|    | 213 | know. [ Laughter.] Ikiets. No, antidas. Ikiets is Tswana. Re-     |

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|    | 214 | inforcing? More paperwork? Limits? Here we've got numbers,              |
|    | 215 | practical counting, shapes and sizes again.                             |
|    | 216 | We've done that. Encouraging, Concrete, progress, language              |
|    | 217 | barriers, good preparation, understanding, enjoyment and noisy?         |
|    | 218 | Ok. Everyone is covered with this?                                      |
|    | 219 | Pause.  |
| R  | 220 | Now the next step is: Silently, you are going to and I am going to      |
|    | 221 | ask that we use the wall, the walls at the back as well. You            |
|    | 222 | take these cards and you put them in groups that belong to one          |
|    | 223 | another. If you look at these ones, uhm, let me give you an             |
|    | 224 | example, I see you've got counting there and you've got counting        |
|    | 225 | here and you've got counting there; all those can belong together.      |
|    | 226 | Start putting it into groups for me. If you feel, let's say, uhm, there |
|    | 227 | is one card that a person place in one group but you feel it            |
|    | 228 | belongs to another group, you go and take it off and you put it in      |
|    | 229 | the group where you want it to. We are not going to fight over it.[     |
|    | 230 | laughter] We are not going to debate it at this stage. Ok. Please       |
|    | 231 | people, everybody got still..uhm, if you need some more prestik,        |
|    | 232 | just ask and I will give you. Just go and start placing everybody's     |
|    | 233 | cards into groups.  |
| Ps | 234 | [start to move around]  |
| R  | 235 | There is also the back space we can also use.                           |

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| Ps | 236 | [move around, silently]  |
| R  | 237 | There are things..., that you more or less took the cards and        |
|    | 238 | ... grouped it into groups.[unidentifiable] Now we can have a        |
|    | 239 | discussion on each group. Once you have gone through a group         |
|    | 240 | We can give it a title. Ok. And we will come back to the titles      |
|    | 241 | just now because once we've given a title, we reflect critically on  |
|    | 242 | what a group is. Let us look at the first group and it says: I       |
|    | 243 | involve myself in activities with other Grade R educators to         |
|    | 244 | gain insight, I then solve some problems with mathematical skills.   |
|    | 245 | Think my learners have a numeracy background and unaware,            |
|    | 246 | I never figured out how I am going to implement it. A topic for this |
|    | 247 | group?   |
| Ps | 248 | [someone says something, but cannot make it out} dedication?         |
| R  | 249 | Ok. What do you think, what is ingesteldheid?                        |
| P  | 250 | Teacher's heart?   |
| R  | 251 | Teachers ingesteldheid, uhm...                                       |
| P  | 252 | How she's ... feelings...  |
| R  | 253 | No, ingesteldheid, attitude, Does everybody agree? Teachers'         |
|    | 254 | attitude. Attitude, towards what?                                    |
| P  | 255 | The subject ...  |
| R  | 256 | Ok, I involve myself in activities with other Gr R teachers to       |
|    | 257 | gain insight – that's a positive uhm attitude né? I then solve       |

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|   | 258 | some problems ...  |
| P | 259 | Positive.  |
| R | 260 | Again. I think my learners have a numeracy.... I never figured     |
|   | 261 | out how I am going to implement it then. I felt miserable at       |
|   | 262 | my first workshop. It can be teachers' attitude.                   |
|   | 263 | Learned about resources and how to use it; accidental reading,     |
|   | 264 | doing numeracy   |
| P | 265 | Planning?  |
| R | 266 | Planning... Planning.  |
|   | 267 | How to present activities to learners, prevent blockages to        |
|   | 268 | learning, should not be leaving out stages, abstract or soon       |
| P | 269 | too soon.  |
| R | 270 | Ok, Give me a topic. Give me a topic. A theme. What will the       |
|   | 271 | theme of this one be you think?                                    |
| P | 272 | Uhm...isn't it? It could be to do with English, uhm, and in fact,  |
|   | 273 | couldn't it be ... progress. I would say actually dealing with the |
|   | 274 | child isn't it?  |
| R | 275 | We are dealing with numeracy concepts, ag, with implementing       |
|   | 276 | numeracy and what we are feeling about it. And this is what is     |
|   | 277 | written about it. You said...                                      |
| P | 278 | Yes, uhm... Barriers   |
| R | 279 | Barriers. Good. Do you feel we must split it? Do you feel          |

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|   | 280 | we must split?   |
| P | 281 | Repetition is not a barrier. It is more paperwork. It's, it's uhm,   |
|   | 282 | there are limits   |
| R | 283 | You want barriers over here?   |
| P | 284 | uhm. Language barriers   |
| R | 285 | Language barriers, but where's another thing to go with the          |
|   | 286 | barriers?  |
| P | 287 | I don't know, I am not sure now that .... How to present activities. |
|   | 288 | More paperwork, or too much paperwork can also be a barrier          |
|   | 289 | cause they are not concrete enough. Some of those,                   |
|   | 290 | they are not all barriers. No, they are not all barriers.            |
| R | 291 | Uhm, re-inforcing barriers, barriers. Don't you think re-inforcing   |
|   | 292 | will go under this one? You got language barriers. Limits can go     |
|   | 293 | in there, and you also have got                                      |
| P | 294 | progress.  |
| R | 295 | Progress there. OK. Present will also go in here. Learned new        |
|   | 296 | ideas, should not be, learned, leaving out stages...also got to do   |
|   | 297 | with barriers. Repetition, can be coming here? Re-inforcing          |
|   | 298 | and repetition, more or less the same?                               |
| P | 299 | uhm  |
| R | 300 | More paperwork, learned new ideas,                                   |
| P | 301 | How to present acti ...  |

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| R | 302 | How to present activities to learners, don't you think this one will |
|   | 303 | come into the barriers as well? How to present, learned new          |
|   | 304 | ideas, more paperwork.   |
| P | 305 | With that top break away, [unclear] how to present activities to     |
| R | 306 | Which one? This one? You rather want it to come under                |
|   | 307 | planning?  |
| P | 308 | Yes.   |
| R | 309 | Goed.  |
| P | 310 | And what about learned new ideas on attitude?                        |
| R | 311 | Ok. Is everyone with us? Is everyone with us? Thanks.                |
| P | 312 | Yes.   |
| R | 313 | Ok, More paperwork?  |
| P | 314 | Barrier.   |
| R | 315 | Planning?  |
| P | 316 | Planning...  |
| R | 317 | Planning.  |
| P | 318 | But that should [unclear] barrier to... paperwork. It's like a ...   |
|   | 319 | you know...a barrier to your own skipping stages...                  |
| R | 320 | Ja, but doesn't need to uhm ... more paperwork needs to go to        |
|   | 321 | planning?  |
| P | 322 | Planning.  |
| R | 323 | Ok. Shall we put it like that? Shall we give it this one? The topic  |

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|   | 324 | of?  |
| P | 325 | Barriers.  |
| R | 326 | Barriers?  |
| P | 327 | Oh, ah, ...I feel and I mean I've seen it that more paperwork is a |
|   | 328 | barrier because they are skipping stages. There is more            |
|   | 329 | paperwork involve now but I think people are going more to the     |
|   | 330 | paperwork rather than practical doing the practical work.          |
| R | 331 | Ok. What does the rest of the group feel? Do you feel this will    |
|   | 332 | lead to more paperwork?  |
| P | 333 | Ja, Yes.   |
| R | 334 | It's negative.   |
| P | 335 | It does. It has ...  |
| P | 336 | Let me just put it like this. OK. And can I...? Do you still agree |
|   | 337 | that it will be barriers?  |
| P | 338 | Mumble   |
| R | 339 | Ok. I am just going to the other group now. Uhm, [saying things    |
|   | 340 | unclearly]. Do you feel this one must go over to the attitude one? |
| P | 341 | Yes.   |
| R | 342 | Do you agree?  |
| P | 343 | Yes.   |
| R | 344 | ...[unclear] attitudes? How you feel? [unclear]....This is the     |
|   | 345 | attitudes group. Everybody is comfortable with this one? Ok.       |

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|   | 346 | Give me a topic or a title for this group? We are surrounded with  |
|   | 347 | numeracy. Numeracy ...   |
| P | 348 | mumbles something.   |
| R | 349 | Sorry. It involves the learner more than the educator,             |
|   | 350 | they love rote learning you've got to prepare them, participation. |
|   | 351 | You said something about learners?                                 |
| P | 352 | Learner's experience or participation                              |
| R | 353 | Ok. Teacher's attitude and learners ...                            |
| P | 354 | Uhm.   |
| R | 356 | Learner's participation, learners' involvement?                    |
| P | 357 | Ja, learners' involvement.   |
| R | 358 | Learner-centredness?   |
| P | 359 | Yes.   |
| R | 360 | Or. Learners' involvement?   |
| P | 361 | Yes, but participation is the same as learners' involvement.       |
| R | 362 | Ja, very much the same. Ok, which one are we going to use?         |
| P | 363 | Involvement.   |
| R | 364 | Involvement? OK.   |
|   | 365 | Pause [whilst writing up title]                                    |
| R | 366 | The next one we got here is ... Again, let us look critical and    |
|   | 367 | see if it all belongs to the same group and whether we must        |
|   | 368 | change it. Noisy, open to learning, the same, over here. Good.     |

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|   | 369 | Let us move the same over here. Good.                              |
| P | 370 | Plus the next one after that ... teacher's attitude.               |
| R | 371 | workshops... this one?   |
| P | 372 | The one ...  |
| R | 373 | Asks a lot of questions? Must go to teachers' attitude? Thank you. |
| P | 374 | Why don't you ...  |
| R | 375 | Sorry?   |
| P | 376 | unclear]... but you still have a child ...                         |
| R | 378 | As I was afraid of how I am going to do it. Ok. Let me put it over |
|   | 379 | here.  |
| P | 380 | I think the next one must also go over there.                      |
| R | 381 | Also to teachers' attitude?  |
| P | 382 | Yes.   |
| R | 383 | Goed. A topic here? [unclear]... Noisy is not really ...           |
| P | 384 | Don't you think that is a barrier?                                 |
| R | 385 | A barrier?   |
| P | 386 | ...[unclear, more than one person speak at the same time] But      |
|   | 387 | you could be noisy too.  |
| R | 388 | Uhm, if we ... OK. We still need to get a topic from this group.   |
|   | 389 | Why don't we say it's atmosphere?                                  |
|   | 390 | Atmosphere?  |
| P | 391 | Ja. They feel noisy, class atmosphere, Class atmosphere.           |

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|   |     | [Pause whilst title of class atmosphere is being written and put up]  |
| R | 392 | What about you Participant , it looks as if you want to say           |
|   | 393 | something? To add?  |
| P | 394 | Don't you think it can be teaching methods so that it is all teaching |
|   | 395 | aids?   |
| R | 396 | Teaching aids? Must we split this group? [Pause.]                     |
| P | 397 | Sorting colours can be an activity. sorting ...should be sorting      |
| R | 398 | Colours different by putting together the matching objects            |
|   | 399 | and counting?   |
| P | 400 | That just an activity. [Mumble] I think the colours is a concept.     |
| R | 401 | Is a concept. Do you feel we must put them on their own?              |
| P | 402 | [unclear mumble] It would be better ...                               |
| R | 403 | over here, Ok. Concept. Can I...This colours one? This activity,      |
|   | 404 | must it stay?   |
| P | 405 | That's an activity.   |
| R | 406 | Activity. It can stay here? OK. So we say this is...                  |
| P | 407 | We take away concrete at the bottom ...                               |
| R | 408 | Concrete as well. Where must I put it? Over here in this              |
|   | 409 | group? Ok. Just give me the topic again on top...                     |
| P | 410 | Attitudes, activities   |
| R | 411 | Activities.   |
| P | 412 | Classroom activities.   |

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| R | 413 | Classroom activities [pause whilst writing topic]                    |
| P | 414 | What about counting... [unclear]                                     |
| R | 415 | This side again?   |
| P | 416 | Yes  |
| R | 417 | Ok. Counting, where's all the countings? Counting, counting.         |
|   | 418 | I feel it is important to teach learners to count using days of the  |
|   | 419 | week.  |
| P | 420 | Activity.  |
| R | 421 | Activity. Ok. Over here? Goed.                                       |
| P | 422 | Puzzles.   |
| R | 423 | And puzzles over here. And all this counting over here?              |
| P | 424 | Yes.   |
| R | 425 | When I uhm, record this, I will record all the counting one by one . |
|   | 426 | I put it all together here as one for time and space now.            |
|   | 427 | Involvement?   |
| P | 428 | [unclear mumble]   |
| R | 429 | Involvement. Learners' involvement go over here.                     |
|   | 430 | Time of day important? We've got that. We've got colours now         |
|   | 431 | here. We've got practical counting using month, using learners,      |
|   | 432 | counting days of the week, all other counting né?                    |
|   |     | [unclear mumble]   |
| R | 433 | Colours, colours, concrete, days of the week is also over there.     |

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| P | 434 | But Elna, the days of the week, is that not a concept that they    |
|   | 435 | have to learn? Is not really ...                                   |
| R | 436 | A concept, must I put it under concept?                            |
| P | 437 | [unclear mumble} I don't know.                                     |
| R | 438 | So you want to have it as a concept né? Time of day? Concept?      |
| P | 439 | Concept.   |
| R | 440 | So we are busy now with actually starting to get a topic already   |
|   | 441 | here. Numeracy concepts. [Pause to write topic] Ok. Number         |
|   | 442 | concepts in here, size, other concepts né, figures, numbers, more, |
|   | 443 | many, quantity, shapes, problem solving, thinking.                 |
| P | 444 | We take problem solving.   |
| R | 445 | And where must I put that?   |
| P | 446 | [unclear mumble]   |
| R | 447 | Under?   |
| P | 448 | [unclear mumble] also take puzzles ...                             |
| R | 449 | [unclear word] must come in here. Thank you. Colours,              |
|   | 450 | concrete experiences, concrete, I feel that the learners are       |
|   | 451 | learning best by doing practical , some learn through rhymes, is   |
|   | 452 | this a, uhm, I feel that learners learn best by doing practical ?  |
| P | 453 | Attitudes.   |
| R | 454 | Attitudes. I put it over there. Does everybody agree?              |
| P | 455 | Yes.   |

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| R | 456 | It goes under teacher's attitude. Comparisons, shapes,           |
|   | 457 | measurement, concrete, concrete experiences, less, few,          |
|   | 458 | seriation, concepts.   |
| P | 459 | I feel that under counting there ...                             |
| R | 460 | Ja.  |
| P | 461 | You can see that I think ...                                     |
| R | 462 | Yes?   |
| P | 463 | Isn't that under teachers' attitude?                             |
| R | 464 | You want it under teachers' attitude? Everybody agrees?          |
| P | 465 | Yes.   |
| R | 466 | Ok.  |
| P | 467 | [unclear mumble] under teacher's attitude.                       |
| R | 468 | Ok. Then we've got here ... then we've got on this group,        |
|   | 469 | Counting is over here né? Then we've got counting over here as   |
|   | 470 | an activity. On this black board we had two stand alones...      |
|   | 471 | Workbooks formal – careful.                                      |
| P | 472 | That's a barrier.  |
| R | 473 | A barrier. See wider picture?                                    |
| P | 474 | That's an attitude, an attitude.                                 |
| R | 475 | An attitude. So we've got no stand alones. The next phase        |
|   | 476 | in our research is, we've got grouped our cards and we've put it |
|   | 477 | under a title or a topic. But now we need to give a short        |

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|   | 478 | descriptive paragraph or definition of what we this title is, looking |
|   | 479 | at our [unclear word] would help here. Let's look at Teacher's        |
|   | 480 | attitude How do you think can we define this, this paragraph?         |
| P | 481 | [unclear mumble]  |
| R | 482 | How do you think we can ... or give a short definition? Let's         |
|   | 483 | do the easy one. Planning. It's got, 1,2,3,4,5,6, just to get us      |
|   | 484 | going perhaps. If you look at planning, just a short descriptive      |
|   | 485 | paragraph or a definition for that. Must plan activities,             |
| P | 486 | [unclear mumble]  |
| R | 487 | Sorry?  |
| P | 488 | Preparation to present the lesson.                                    |
| R | 489 | The preparation, the prepatation to present the lesson.               |
| P | 490 | Sorry, without good planning the lesson, uhm, if it is not good       |
|   | 491 | planning it is detrimental to the child.                              |
| R | 492 | Ok.   |
| P | 493 | I didn't want to put it like this.                                    |
| R | 494 | Can anyone help here?   |
| P | 495 | You need to put it positively. Yes. It's poor, it means that the      |
|   | 496 | child will suffer if we haven't plan weekly. Can you put it in?       |
|   | 497 | [unclear mumble] better English? [unclear mumble] ensures             |
|   | 498 | good learning? Optimal... Yes. If you haven't good planning           |
|   | 499 | you can't teach properly. Uhm, I want my learners to achieve.         |

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|   | 500 | And planning... You do your planning while you have also            |
| P | 501 | enough to correct or ...  |
| R | 502 | Would you say, good planning involves real life resources?          |
| P | 503 | Ja.   |
| R | 504 | Ok, I just want to read it for you quickly, as a summary. The       |
|   | 505 | preparation to present the lesson, that's the definition.           |
|   | 506 | Good planning ensures optimal learning. I planned what I want       |
|   | 507 | my learners to achieve. Good planning involves real life resources. |
|   | 508 | Is everyone happy with this one?                                    |
| P | 509 | Yes. So it can be quiet a long explanation?                         |
| R | 510 | Ja, it can be.  |
| P | 515 | Or a very short uhm...  |
| R | 512 | It can be, ja . I especially liked what you said. I plan what I     |
|   | 513 | want my learners to achieve. That's the personal perspective        |
|   | 514 | that's coming in here, which I need. I am just putting it here.     |
|   | 515 | Sorry. Let's do another short one. Let's do the short ones quickly. |
|   | 516 | Uhm, this one.  |
| P | 517 | Barriers  |
| R | 518 | Barriers. More paperwork, repetition, and workbooks formal -        |
|   | 519 | careful, language barriers, prevent blockage, learning should not   |
|   | 520 | leave out stages e.g. abstract too soon re-inforcing, limits,       |
|   | 521 | progress.   |

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| P | 522 | Barriers lead the teacher to possible uhm problems.                   |
| R | 523 | Uhm just repeat it.   |
| P | 524 | To alert the educator to, to possible uhm problems. I think           |
|   | 525 | also plan your lesson around those barriers. Perhaps I can just       |
|   | 526 | say for example, a child who has language barriers, could help if     |
|   | 527 | you use a lot of visual aids as well. [Pause whilst writing]          |
|   | 528 | unclear mumble] to give a child more time is detrimonial ...          |
|   | 529 | [especially a child with a second language                            |
| R | 530 | Let me just give it to you, then you can add some more. To alert      |
|   | 531 | educators to possible problems, that is the barrier, the definition.  |
|   | 532 | To plan lessons around barriers e.g. a child with a language          |
|   | 533 | barrier learn quicker with visual aids and repetition instilss better |
|   | 534 | learning, especially learners with a second language.                 |
| P | 535 | It is important to understand the concrete concepts before moving     |
|   | 536 | on to the abstract.   |
| R | 537 | Ok. A lot of paperwork can be a barrier instead of teaching           |
|   | 538 | practical and it is important to understand the concrete concepts     |
|   | 539 | Before moving on to the abstract. Ok. Let's do this one. Class        |
|   | 540 | atmosphere. Noisy, open to learning, use creative thinking,           |
|   | 541 | positive, eager, confused, excited, understanding, positive           |
|   | 542 | interaction, positive self-esteem, excited, atmosphere positive,      |
|   | 543 | enjoyment, encouraging, change to built relations, correct            |

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|   | 544 | atmosphere, relaxed important, enjoyment, important to develop a   |
|   | 545 | future citizen, enlightning, children enjoy it, it's fun, positive |
|   | 546 | participation,   |
| P | 547 | relaxed atmosphere...  |
| R | 548 | Class atmosphere,  |
| P | 549 | is essential for numeracy or number ...                            |
| R | 550 | To set the stage, positive atmosphere important.                   |
| P | 551 | To set the stage for positive atmosphere, ja.                      |
| R | 552 | Positive atmosphere encourages uhm ...                             |
| P | 553 | It is also enthusiastic. Teachers need to be, [unclear mumble]     |
|   | 554 | negative to their subject they will reflect it on to the ...       |
| R | 555 | Teacher's negative [unclear] learners pick it up.                  |
| P | 556 | I think a lot of experimentation ... uhm, patience, if you shout   |
|   | 557 | at a child ... withdraw or ...                                     |
| R | 558 | Exposure?  |
| P | 559 | To give him exposure without giving too much, to put him at ease,  |
|   | 560 | in the beginning especially. So that they not to scared to to try. |
|   | 561 | Encourage, to give them encourage experiment, To feel free to      |
|   | 562 | experiment without fear of being rejected up I know as wrong or    |
|   | 563 | whatever. Just to make him feel at ease. With numeracy.            |
|   | 564 | Nurturing, uhm a child needs ...                                   |
| R | 565 | Do you want to add more?   |

|   |     |   |
|---|-----|---|
|   | 566 | I think this is what we are saying with all this other stuff. Ok, let's |
|   | 567 | go back to this one. Yes. That's fine. Thank you so much.               |
|   | 568 | [A participant left the room due to an urgent appointment]              |
|   | 569 | Numeracy involve the learner more than the educator,                    |
|   | 570 | learner participation, thinking, important for learners, we are         |
|   | 571 | surrounded with numeracy, feel they love rote learning, need to         |
|   | 572 | prepare them, Involvement, problem solving. What do you                 |
|   | 573 | say about this Involvement?   |
| P | 574 | What about prior knowledge?   |
| R | 575 | Sorry? Must we alert ?  |
| P | 576 | Well the teacher must [unclear]. Just to facilitate, The teacher as a   |
|   | 577 | facilitator will, will ensure that, you know, that positive involvement |
|   | 578 | They learn best through their senses.                                   |
| R | 579 | Best through their ..... They use their senses. Ok. Participant         |
|   | 580 | what would you like to add? Problem solving, thinking,                  |
|   | 581 | we are surrounded with numeracy, important for learners, how do         |
|   | 582 | you think [unclear, too soft] ...                                       |
| P | 583 | We should also let them to explore.                                     |
| R | 584 | Explore on their own? Also learner participation there and              |
|   | 585 | problem solving. Ok, anything else you'd like to add problem            |
|   | 586 | solving. Ok, anything else you'd like to add there. Just to recap.      |
|   | 587 | Educators should recognize learners' prior knowledge. The               |

|   |     |  |
|---|-----|--|
|   | 588 | teacher as facilitator will ensure their positive involvement. As      |
|   | 589 | facilitator will ensure their positive involvement. They learn         |
|   | 590 | best when they use their senses. Let learners explore on their         |
|   | 591 | own and do problem solving. Participant?                               |
| P | 592 | Encourage learners to think for themselves.                            |
| R | 593 | Encourage learners to think for themselves. Uhm, Participant?          |
| P | 595 | Learners' participation through different activities. You know         |
|   | 596 | what I mean? Working in a group, even say like singing, they are       |
|   | 597 | involved in some kind of singing activity, they actually will          |
|   | 598 | participate when they learn better.                                    |
| R | 599 | When they participate in a group?                                      |
| R | 600 | Ja Goed. Learners learn better when they participate in a group?       |
| P | 601 | Small group activities.  |
| R | 602 | Small group activities. I see. Participant , would you like to         |
|   | 603 | add something more?  |
| P | 604 | No.  |
| R | 605 | Let's come to the teachers' attitude. I involve myself with activities |
|   | 606 | with other Gr R educators to gain insight, I then solve problems       |
|   | 607 | with mathematical skills, think my learners have a numeracy            |
|   | 608 | background and unaware, I never figure out how I am going to           |
|   | 609 | implement it then, learned new ideas, I felt miserable at my first     |
|   | 610 | workshop, I believe it would lead the young ones to greener            |

|   |     |  |
|---|-----|--|
|   | 611 | pastures, I asked a lot of questions as I was afraid how I am going  |
|   | 612 | to deliver it to a child, workshops were always interesting and fun. |
|   | 613 | I feel that learners are learning best when they do it practical,    |
|   | 614 | Some learn it through rhymes, I feel that it is very important to    |
|   | 615 | teach learners to count using days of the week. How can we           |
|   | 616 | define this paragraph?   |
| P | 617 | Uhm, positive attitude towards numeracy encourages learners          |
|   | 618 | to be actively involved.   |
| R | 619 | Positive attitude towards numeracy ...                               |
| P | 620 | encourages learners to be actively involved in activities..          |
| R | 621 | Ok. Goed. Teachers to have a positive attitude? Goed.                |
| P | 622 | At workshops always interesting and fun. I think at our workshops    |
|   | 623 | you always learn new ideas [unclear] for the betterment of the       |
|   | 624 | children.  |
| R | 625 | I felt miserable at my first workshop.                               |
| P | 626 | What about uhm, making activities fun too?                           |
| R | 627 | Making activities fun too. Ok. Would you like to add?                |
| P | 628 | A child can always be positive to change.                            |
| R | 629 | Sorry, what can we change?   |
| P | 630 | The teacher must always be positive to change.                       |
| R | 631 | Ok. Would you like to add some more? I think my learners             |
|   | 632 | have a numeracy background. I never figure out how I am going        |

|   |     |   |
|---|-----|---|
|   | 633 | to deliver it to them. That one goes together with the workshop     |
|   | 634 | there? I felt miserable ... So,[unclear, too soft] that's why they  |
| R | 635 | should get positive towards new things. Ok. [unclear]               |
| P | 636 | And also we get a lot of clarity in the workshops, especially the   |
|   | 637 | things you didn't understand.                                       |
| R | 638 | Didn't understand? As long as you get positive to them?             |
| P | 639 | Teachers seem ... Teacher's enthusiasm is very important.           |
| R | 640 | Anything else you would like to add?                                |
| P | 641 | Yes, I am not sure if it is fitting there. Uhm, If the teacher is . |
|   | 642 | always doing [unclear] will have some learners to learn that.       |
| R | 643 | Ok. Continuous assessment ...                                       |
| P | 644 | leads to learner progression.                                       |
| R | 645 | Learner progression. Ok. Activities.                                |
| P | 646 | Feel that this activities , their special needs.                    |
| R | 647 | Through activities the teacher identifies special needs.            |
| P | 648 | Uhm.  |
| R | 649 | Ok. Participant?  |
| P | 650 | All work and no play makes John a dull boy.                         |
| R | 651 | All work and no play makes John a dull boy.                         |
| P | 652 | Teachers should then ensure that there are activities available to  |
|   | 653 | cover all areas. Visual concept, whatever, all that areas           |
| R | 654 | Activities cover all areas of development?                          |

|   |     |  |
|---|-----|--|
| P | 655 | Yes.   |
| R | 656 | E.g. physical, spatial, cognitively,                                   |
| P | 657 | Encourage them. They should not just do activities as they are         |
|   | 658 | [unclear] activities. They should stimulate it.                        |
| R | 659 | They should?   |
| P | 660 | They should stimulate learners.  |
| R | 661 | They should stimulate learners' interest?                              |
| P | 662 | Ja.  |
| R | 663 | Ok. Participant, anything you want to add?                             |
| P | 664 | Also, all the activities should go with the theme or topic that        |
|   | 665 | you are dealing with.  |
| R | 666 | Go with theme or topic. And our last one is about concepts.            |
|   | 667 | Colours, concrete, days of the week, time today, many,                 |
|   | 668 | quantities, shapes, comparisons, measurement, less,few,                |
|   | 669 | seriation, shapes, sizes, numbers, size, number concept.               |
| P | 670 | You know what I meant by time of day important; was that the time      |
|   | 671 | of day when you do numeracy, when it is late in the day or early       |
|   | 672 | in the day, I don't know if that should be on it on that heading, but  |
|   | 673 | that's what I meant with that is they are fresh , it's easier for them |
|   | 674 | To do mental work when they do it early in the morning than at the     |
|   | 675 | end of the day.  |
| R | 676 | early in the morning?  |

|   |     |   |
|---|-----|---|
| P | 677 | Yes.  |
| R | 678 | Would you like to take it away and put it under planning?           |
| P | 679 | Yes.  |
| R | 680 | Just add this comment under planning. Thanks. What can              |
|   | 681 | we say about concepts? Concepts must cover uhm,                     |
|   | 682 | concepts must uhm ja?   |
| P | 683 | concepts must ...   |
| R | 684 | Ok, let's get it.   |
| P | 685 | Concepts should be concrete.  |
| R | 686 | Concepts should be concrete.  |
| P | 687 | And based on Learning Outcomes ...                                  |
| R | 688 | and Assesment standards. Concepts should be concrete.               |
|   | 689 | There are a lot of different concepts né? A variety of concepts to  |
|   | 690 | be dealt with. Days of the week, concrete experience, less, few.    |
|   | 691 | So it is very important to have them all concrete? Figures, what do |
|   | 692 | we mean with figures? We got shapes, we got figures.                |
| P | 693 | Figures is numbers.   |
| R | 694 | Figures is numbers? So there is a variety of concepts that should   |
|   | 695 | be taught?  |
| P | 695 | I think that the child learns better when all these concepts        |
|   | 696 | through practical activities  |
| R | 697 | They are concrete?  |

|     |  |  |
|-----|--|--|
| P   | 698  | Ja.  |
| R   | 699  | They are concrete. In alphabetical order we have written down            |
|     | 700  | the concepts. Number one will be barriers, number two will be            |
|     | 701  | classroom atmosphere, number three classroom activities, number          |
|     | 702  | four concepts, number five, learner involvement, number six              |
|     | 703  | planning and number seven teachers' attitude. What we are going          |
|     | 704  | to do is, we are going to see whether there is any relationship          |
|     | 705  | between one affinity and another one. That's why you are going           |
|     | 706  | to look at affinity one and see if there is a relationship with          |
|     | 707  | affinity two. That's barriers against classroom atmosphere. Ok,          |
|     | 708  | if there isn't, if you say, yes there is a relationship, you must say to |
|     | 709  | me how does it look? Does Barriers influence classroom                   |
|     | 710  | atmosphere or does the atmosphere influence the barriers? If 1 is        |
|     | 711  | influencing 2? then you must give me an arrow to the left, ag to the     |
|     | 712  | right. When 2 is influencing 1, you must give me an arrow to the         |
|     | 713  | left. If there is no or any relationship, you give me both those         |
|     | 714  | brackets. Remember then to give me an IF/THEN statement. If              |
| 715 | there is a relationship, then that is happening. Please try to use |  |
| 716 | as much as classroom examples as possible.                         |  |
| R   | 717  | Thank you for everyone's participation. We have completed                |
|     | 718  | Phase 1 of this Research.  |

## APPENDIX E

|  |
|--|
| <b>TRANSCRIPTION OF AN UNSTRUCTURED OPEN-ENDED FOCUS GROUP</b><br><b>INTERVIEW 2 – COASTAL GROUP A</b> |
|--|

R – Researcher, P – Participants

| P/R | Line | Discussion   |
|-----|------|--|
| R   | 1    | We are recording now. We are not calling each other at the             |
|     | 2    | name because I have assured yourself your individuality.               |
| P   | 3    | Anominity.   |
| R   | 4    | Your anominity in this regard. Thank you once again, for being         |
|     | 5    | here. I want you all to take a big breath and just relax. What I       |
|     | 6    | want you to do now is, I am going to give you a sentence, a            |
|     | 7    | statement, and I want you then to reflect on what I am asking you.     |
|     | 8    | Any thoughts, uhm, words, feelings that come to your mind, you         |
|     | 9    | must please write for me down, in silence, on to this thing. But it is |
|     | 10   | one page or one thought or one word on a piece of paper. It can        |
|     | 11   | be a sentence as well.   |
| P   | 12   | It is not a whole line, it's just an idea?                             |
| R   | 13   | Yes, an idea, but I would love you to finish up all those papers;      |
|     | 14   | I've got lots of them over here as well. The more we get, it's a       |
|     | 15   | way of brain-storming that we are going to do. So, any thing you       |
|     | 16   | feel or say. But before you are going to do that I want you to sit     |

|   |    |   |
|---|----|---|
|   | 17 | comfortably, close your eyes, take deep cleansing breaths, and  |
|   | 18 | put aside all your thoughts of the day. I want you to think or  |
|   | 19 | imagine yourself in your classroom. Visualize how your classroom  |
|   | 20 | looks. I want you to focus on what you are hearing, and seeing  |
|   | 21 | in your classroom. Now, focus or visualize on how and where   |
|   | 22 | and in which way numeracy is being present in your classroom.   |
|   | 23 | In which area of your classroom you've got numeracy objects,  |
|   | 24 | posters, equipment being placed out? Set out for the learners. I want you to think or to reflect on your feelings and thoughts when I |
|   | 25 | asked the following three questions. Please write these feelings  |
|   | 26 | and thoughts down. Use a separate card for every experience or  |
|   | 27 | thought. I am going to take one statement at a time and give you  |
|   | 28 | some time to write. Then I'll go for the following. The first one is:   |
|   | 29 | Tell me what you think or feel or call to mind when I use the   |
|   | 30 | term numeracy. What are you thinking of or feeling when I say   |
|   | 31 | numeracy. Okay, I'm going to ask you now, to write also for me,   |
|   | 32 | about your experiences or your feelings or your thoughts,   |
|   | 33 | when you implement numeracy in your classroom. How do you   |
|   | 34 | feel about that?  |
| P | 35 | How do we as the teacher feel?  |
| R | 36 | Yes, how do you as a person, as a teacher feel about  |
|   | 37 | implementing numeracy in the classroom?   |

|    |    |  |
|----|----|--|
| P  | 38 | same colour?   |
| R  | 39 | You may use another colour if you want to...   |
| P  | 40 | I just thought it may be easier for you.   |
| R  | 41 | No, no, it doesn't matter.   |
| P  | 42 | I've got a black somewhere.  |
| R  | 43 | You want a black one?  |
|    | 44 | Okay, now I want you to write for me about your experiences or                       |
|    | 45 | feelings of attending numeracy in-service training sessions by the                   |
|    | 46 | district office, by unions, by NGO's. Any numeracy training that                     |
|    | 47 | you have ever received. How do you feel about it?                                    |
|    | 48 | What are your experiences about it? How did you feel going to                        |
|    | 49 | these sessions?  |
|    | 50 | Okay, thank you. What we are going to do now is, I want each of                      |
|    | 51 | you to take some prestik, take your package of cards you have                        |
|    | 52 | written and go to a place on the mirror and put it randomly on the                   |
|    | 53 | mirror, one by one.  |
|    | R  | 54   |
| 55 |    | we are going to go through each of these cards and if you                            |
| 56 |    | don't understand what the word is, just show me, that we can                         |
| 57 |    | discuss it, that we can all, the big thing here is that we must all                  |
| 58 |    | have a common understanding of each word. Okay, <i>happy</i> I think                 |
| 59 |    | Is we feel happy, <i>encourage</i> , <i>sorting</i> , <i>vague</i> , vague means not |

|   |    |   |
|---|----|---|
|   | 60 | Clear vaag nè? <i>To be open in mind, mathematics, comfortable,</i>       |
|   | 61 | <i>measurement, encourage, counting, data handling, excited,</i>          |
|   | 62 | <i>counting numbers, puzzles, happy, to know more about numeracy</i>      |
|   | 63 | <i>beads, dominoes, collecting, mass, exciting, estimation, change</i>    |
|   | 64 | <i>sequencing, sometimes excited, constructing, building nè?</i>          |
| P | 65 | Uhhh.   |
| R | 66 | <i>Measurement, creative activities, fun, patterns, rhymes,</i>           |
|   | 67 | <i>drawings, numbers, counting, shapes, looking for more,</i>             |
|   | 68 | <i>stimulation very keen to attend, patterns, excitement, life lewe?</i>  |
| P | 69 | Uhhh.   |
| R | 70 | Is that what, I don't know, any one can contribute here nè.               |
|   | 71 | <i>Excited, challenge, fun, look, counting songs, living, sharing,</i>    |
|   | 72 | <i>rhymes, poems, creative activities, relevant, suited for</i>           |
|   | 73 | <i>under-privileged only, numbers, waste of time, creative, laughter,</i> |
|   | 74 | <i>games, fun, shopping, fun. Movement, nature, very basic,</i>           |
|   | 75 | <i>enjoyment, sometimes scared, beneficial, happy, confident, more,</i>   |
|   | 76 | <i>less, balancing, helpful, shapes, doubling, counting, blocks,</i>      |
|   | 77 | <i>numbers halving, months, estimating, worth it, not alone.</i>          |
|   | 78 | Everybody understands all the words that have been said?                  |
| P | 79 | Nod in agreement.   |
| R | 80 | What I want you to do now is and here we do it in silence again.          |
|   | 81 | You go now and you place the cards that you think belong                  |

|   |     |   |
|---|-----|---|
|   | 82  | together you place it. If somebody else takes it away, it's fine, |
|   | 83  | you can go and put it back there again. Okay? So, everyone, it    |
|   | 84  | looks a bit deurmekaar when we do it, but just get a group        |
|   | 85  | and start thinking where you want to place the cards. Here is     |
|   | 86  | some more Prestik.  |
| P | 87  | Must we just determine our own columns?                           |
| R | 88  | Just look at the cards and columns where they belong to.          |
|   | 89  | Are there any groups here that you feel that do not belong in     |
|   | 90  | a group? Are all of them more or less in a group for you?         |
| P | 91  | I would say ja, definitely.                                       |
| R | 92  | Okay, this group, I can see it forms a group. Does this all       |
|   | 93  | form one group?   |
| P | 94  | No, this try from there.  |
| R | 95  | From here?  |
| P | 96  | Yes, that's a group.  |
| R | 97  | Do you mind if I just quickly ...                                 |
| P | 98  | Just take the first lot and put it over. No, no, that whole line. |
| R | 99  | Okay,   |
| P | 100 | It gives you a natural cut. Those are all the extensions.         |
| R | 101 | Okay.   |
| P | 102 | Feelings and ...  |
| R | 103 | And this?   |

|   |     |   |
|---|-----|---|
| P | 104 | Ja.   |
| R | 105 | Is this another group?  |
| P | 106 | Ja.   |
| R | 107 | Okay. And this is another group?                                  |
| P | 108 | Ja. Content, feelings, Extensions, Values.                        |
| R | 109 | If we look at this group, do you feel you could give this group a |
|   | 110 | heading? This group here. What do you like to group this group?   |
| P | 111 | Content.  |
| R | 112 | Content?  |
| P | 113 | Content. That's content.  |
| R | 114 | Content. How you feel, everybody agrees?                          |
| P | 115 | Ja.   |
| R | 116 | Content, okay. The middle group?                                  |
| P | 117 | Teacher. Feelings.  |
| R | 118 | Feelings?   |
| P | 119 | Yes.  |
| R | 120 | Feelings. Okay, we'll come back to this feelings one, just now.   |
|   | 121 | This group over here?   |
| P | 122 | Extension, that's extension.                                      |
| R | 123 | Extension?  |
| P | 124 | That's extension. Supplementary activities.                       |
| R | 125 | Supplementary activities? Participant, how do you feel?           |

|   |     |   |
|---|-----|---|
| P | 126 | [unclear]   |
| R | 127 | You also feel extension activities? Extension. And this last                  |
|   | 128 | group?  |
| P | 129 | [group coughing and some movement noises]                                     |
| R | 130 | <i>Excited, not alone, waste of time, looking for more stimulation,</i>       |
|   | 131 | <i>worth it,</i>  |
| P | 132 | Values? That is definitely about [unclear]. This is the value                 |
|   | 133 | of in-service training. Ja.   |
| R | 134 | Value of in-service training?   |
| P | 135 | Ja.   |
| R | 136 | Does everybody agree with that?   |
| P | 137 | Ja.   |
| R | 138 | Values of in-set. What we are going to do now is, we are going                |
|   | 139 | to go through each of these headings and then you are going to                |
|   | 140 | write up a paragraph. A descriptive paragraph or a definition                 |
|   | 141 | about these headings. And the first one we are going to do is this            |
|   | 142 | one. Let's start with the <i>Content</i> . We said, twice <i>patterns</i> nè? |
|   | 143 | One, two, is there another <i>pattern</i> ? <i>Pattern, sorting, shapes,</i>  |
|   | 144 | <i>moulding, measurement, estimating, balancing, mass, numbers,</i>           |
|   | 145 | <i>doubling, data handling, another numbers, collecting, colours,</i>         |
|   | 146 | <i>numbers, there's another numbers over here, more or less,</i>              |
|   | 147 | <i>equal, counting, there's another measurement here, and then</i>            |

|   |     |   |
|---|-----|---|
|   | 148 | there is another <i>counting</i> over here, one two three, four <i>counting</i> ,       |
|   | 149 | five, <i>shapes</i> over here, <i>numbers</i> , <i>numbers</i> okay <i>sequencing</i> , |
| P | 150 | There are two <i>sequencing</i> . There on the left.                                    |
| R | 151 | One, two, three, that is four, two <i>sequencing</i> . One, oh, I've got it.            |
| R | 152 | And then you have <i>constructing</i> , and <i>estimation</i> . Okay. And               |
|   | 153 | another <i>estimation</i> down here. <i>Estimating</i> , okay. If you say, this         |
|   | 154 | is the <i>Content</i> , if you must give a definition of all this, how would            |
|   | 155 | you do that. Think about it. Can I give you a few seconds to think                      |
|   | 156 | about it whilst I quickly write down here? [after some time] Is this                    |
|   | 157 | what you want the learner to know?  |
| P | 158 | Ja. I would say numeracy includes the act of patterning,                                |
|   | 159 | sorting, identifying shapes, counting, identifying numbers,                             |
|   | 160 | colours, constructing, sequencing. It includes the act of                               |
|   | 161 | of patterning, wait, it includes identifying and building. Numeracy                     |
|   | 152 | includes identifying and building, patterning.  |
| R | 163 | Okay, patterning, then you start ...  |
| P | 164 | Then you start naming all this, shapes numbers, colours, counting,                      |
|   | 165 | all of those verbs,   |
| R | 167 | Okay, includes ...  |
| P | 168 | All of them.  |
| R | 169 | Identifying , who must ...  |
| P | 170 | It includes identifying and building.   |

|   |     |  |
|---|-----|--|
| R | 171 | And building of?   |
| P | 172 | Ja, they must be able to identify and construct or build or          |
|   | 173 | reproduce. Reproduce is a better word.                               |
| R | 174 | Construct, build ...   |
| P | 175 | Stroke reproduce, all of that.                                       |
| R | 176 | Okay, who must do that? The learner?                                 |
| P | 177 | The learner.   |
| R | 178 | By the learner.  |
| P | 179 | In concrete form.  |
| R | 180 | In concrete form.  |
| P | 181 | Yes.   |
| R | 182 | If you look at this group, is there anything you would like to       |
|   | 183 | add to this one?   |
| P | 184 | Basically it covers, it gives you a good overall, I would say.       |
|   | 185 | But I would just, I would definitely add concrete material.          |
| R | 186 | Let's add it, concrete material.                                     |
| P | 187 | <i>Concrete apparatus</i> , can I use that?                          |
| R | 188 | Okay,  |
| P | 189 | I don't know if we will add there, <i>foundation for later work?</i> |
|   | 190 | For later numeracy. I would say you have to do it in concrete form,  |
|   | 191 | or to be able to form the foundation for later abstract work.        |
| R | 192 | Okay, in concrete form, in order to lay foundation.                  |

|   |     |  |
|---|-----|--|
| P | 193 | Ja.  |
| R | 194 | To lay a numeracy foundation?  |
| P | 195 | Ja, to lay a numeracy foundation.  |
| R | 196 | For?   |
| P | 197 | Abstract. For later abstract work.                                       |
| R | 198 | Abstract thinking and reasoning?   |
| P | 199 | Ja. Yes, very definitely.  |
| R | 200 | If we say that, don't you think we must put in [unclear] as well?        |
|   | 201 | Thinking and reasoning?  |
| P | 202 | Ja. <i>Thinking and reasoning</i> is definitely content.                 |
| R | 203 | Just write that for me as well because that came from your               |
| P | 204 | Definition   |
| R | 205 | nè? <i>Abstract</i> we can also put in a separate ...                    |
| P | 206 | There it is, I've got one there.   |
| R | 207 | Thanks. Okay, is everyone covered?                                       |
| P | 208 | Yes.   |
| R | 209 | You feel this come over here? I just want to repeat                      |
|   | 210 | <i>Numeracy includes the identifying, constructing, building</i>         |
|   | 212 | <i>and reproducing of patterning, shapes, numbers, all these things?</i> |
| P | 213 | Ja.  |
| R | 214 | <i>By the Grade R learner in concrete form in order to lay a</i>         |
|   | 215 | <i>numeracy foundation for later abstract thinking and reasoning.</i>    |

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|---|-----|---|
| P | 216 | Very comprehensive. You will not get better than that.                          |
| R | 217 | Thank you. Let's move on to the next one, <i>Feelings</i> . Whose feelings?     |
| P | 218 | The teacher and child, mmm  |
| R | 219 | Teacher and child? If we say  |
| P | 220 | I'd say it is mostly the teacher there.   |
| R | 221 | If we say child, the ones that you want to put under the children's             |
|   | 222 | feelings, can we put it ...?  |
| P | 223 | He will definitely feel <i>challenged</i> .                                     |
| R | 224 | Let's put here the learners' stuff. You feel <i>challenge</i> , where's it?     |
| P | 225 | Top, right at the top.  |
| R | 226 | You will feel [unclear]   |
| P | 227 | That can also go for teacher and child. He should be <i>excited</i> .           |
|   | 228 | My children are excited when we do maths,                                       |
| R | 229 | <i>excited</i> , as well as ...   |
| P | 230 | And <i>fun</i> , definitely, a big one.   |
| R | 231 | <i>Fun</i> over here? And <i>fun</i> over here. <i>Happy</i> ? Both sides? Okay |
|   | 232 | I'm going to split equally.   |
| P | 233 | <i>Enjoy</i> .  |
| R | 234 | <i>Enjoyment</i> . Who must enjoy it?   |
| P | 235 | The child.  |
| R | 236 | So it must be here? <i>Excited</i> .  |
| P | 237 | We've got that one.   |

|   |     |  |
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| R | 238 | The learner must be excited?   |
| P | 239 | And the teacher. There's another one at the bottom there.                                      |
| R | 240 | <i>Fun</i> we had, over there. Both sides?   |
| P | 241 | Ja. And <i>confident</i> for both.   |
| R | 242 | Okay.  |
| P | 243 | That one in the middle.  |
| R | 244 | <i>Confident</i> here, we've got another <i>confident</i> ?                                    |
| P | 245 | Eh-uh.   |
| R | 246 | <i>Encouraged</i> ? The learner must be encouraged.  |
|   | 247 | The teacher? Must she also be encouraged?  |
| P | 248 | Yes.   |
| R | 249 | Okay. This one is confident. The teacher must be <i>confident</i> and                          |
|   | 250 | the learner must be <i>confident</i> nè?   |
| P | 251 | Yes.   |
| R | 252 | <i>Exciting</i> we've had, <i>excited</i> , <i>excited</i> , <i>excitement</i> , they all come |
|   | 253 | back to <i>excite</i> .  |
| P | 254 | Yes.   |
| R | 255 | The teacher must be exciting in her presentation?  |
| P | 256 | Ja, put it over. <i>Comfortable</i> for both.  |
| R | 257 | Okay. <i>Helpful</i> we had at one stage.  |
| P | 258 | Teacher, teacher.  |
| R | 259 | Yes. <i>Laughter</i> ? It goes back to <i>happy</i> nè?  |

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| P | 260 | Ja.  |
| R | 261 | <i>Sharing?</i>  |
| P | 262 | Ja, the teacher must share.  |
| R | 263 | The teacher must share? Okay. So, over here, we've got                       |
|   | 264 | actually <i>Feelings of the Learner</i> and <i>Feelings of the Teacher</i> . |
|   | 265 | We are actually splitting this one into two.                                 |
| P | 266 | Yes.   |
| R | 267 | Firstly, we must now write up a descriptive paragraph; do you want           |
|   | 268 | to do it separately? Or do you want to do it combined?                       |
| P | 269 | We could do it together, because they are so the same.                       |
| R | 270 | Okay.  |
| P | 271 | Feelings that must be evident within the circle time or ring time.           |
| R | 272 | Shall we start with something like: <i>Feelings that are experienced</i>     |
|   | 273 | <i>by both the teacher and the learner?</i>                                  |
| P | 274 | Ja.  |
| R | 275 | <i>Teacher and the learner ...</i>   |
| P | 276 | during the [unclear]   |
| R | 277 | <i>are</i> , and then I call all of them <i>né?</i>                          |
| P | 278 | Uhm.   |
| R | 279 | I am not going to number them now. What happens if a learner is,             |
|   | 280 | I just want to come over here to the learner, <i>excited, challenged.</i>    |
|   | 281 | Why, if a learner is feeling challenged, he won't feel <i>excited</i> ,      |

|   |     |  |
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| R | 282 | <i>fun, confident.</i>   |
| P | 283 | But we must challenge the learner.   |
| R | 284 | Okay, what you are saying to me: <i>Learners must be challenged,</i>       |
|   | 285 | why must they be challenged?   |
| P | 286 | For learning to take place.  |
| R | 287 | <i>For learning to take place. Even though the learner might feel,</i>     |
|   | 288 | what was the word we used here?  |
| P | 289 | What is your sentence?   |
| R | 290 | I say here, all these things, say to me it is positive with the            |
|   | 291 | exception of <i>challenged</i> . All these other things, <i>enjoyment</i>  |
|   | 292 | <i>excited, fun, happy, encouraged, confident</i> . I can even say         |
|   | 293 | <i>encourage</i> here, are positive feelings né? A learner that is feeling |
|   | 294 | this, when a learner, this is the ideal.                                   |
| P | 295 | Ja.  |
| R | 296 | That's what you want learners to do. Whenever they are                     |
|   | 297 | exposed to numeracy, you want them to be <i>happy, to feel</i>             |
|   | 298 | <i>excited about it, to experience enjoyment</i> . But in this process,    |
|   | 299 | there might be learners that are challenged. And how can we ...            |
|   | 300 | Why are they challenged?   |
| P | 301 | Because they might not have the prior knowledge.                           |
| R | 302 | Can you put that one in for me, <i>asseblief, prior knowledge</i> .        |
|   | 303 | That's my feeling [unclear], remember, we are talking about                |

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|   | 304 | feelings.   |
| P | 305 | Ja, that links with being <i>challenged</i> .                                   |
| R | 306 | It might be what the learner brings to school that day.                         |
|   | 307 | He might have his prior knowledge, but when his mom and his dad                 |
|   | 308 | are getting divorced, he is definitely not going to feel very                   |
|   | 309 | encouraged to do maths.   |
| P | 310 | That's why it is important for your teacher to be <i>helpful and</i>            |
|   | 311 | <i>understanding</i> .  |
| R | 312 | <i>Understanding</i> , we've got <i>understanding</i> here.                     |
| P | 313 | Do we've got it? No, we haven't.  |
| R | 314 | Yes, can we get <i>understanding</i> here as well. <i>Challenged</i> might feel |
| P | 315 | and <i>no prior knowledge</i> equals <i>challenge</i> .                         |
| R | 316 | <i>Due to no prior knowledge</i> ,  |
| P | 317 | But he might not be in here because of prior knowledge, she might               |
|   | 318 | just be emotionally insecure.   |
| R | 319 | <i>The learner might feel emotional insecure</i> .                              |
| P | 20  | Ja. And have no prior knowledge. Well, plus ...                                 |
| R | 321 | <i>Due to, either no prior knowledge</i> ,                                      |
| P | 322 | Or emotional ...  |
| R | 323 | Emotional discrepancies, emotional issues, or even, why a learner               |
|   | 324 | feels sometimes challenged, or insecure, is because of the language.            |
| P | 325 | Yes.  |

|   |     |  |
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| R | 326 | They don't understand what you are saying.                                       |
| P | 327 | Well that would be no prior knowledge, same thing.                               |
| R | 328 | Don't you think this will be prior knowledge of numeracy?                        |
| P | 329 | Ja, alright. So he might be insecure, no prior or even language barriers,        |
|   | 330 | do you want it?  |
| R | 331 | <i>Language barriers.</i> Or due to the fact he is, I want to say, emotional     |
|   | 332 | and social issues né?  |
| P | 333 | Ja.  |
| R | 334 | Because this learner might be a learner that does not know how to handle         |
|   | 335 | himself in a group situation. <i>Understanding? Language Barriers?</i>           |
|   | 336 | Are they together?   |
| P | 337 | No, the teacher must be understanding.   |
| R | 338 | We said we wanted to have this together here né? So that's why I am              |
|   | 339 | still busy with this whole thing ... <i>Therefore, to have a confident,</i>      |
|   | 340 | because a happy child is confident, <i>confident</i> , it is not only confident. |
|   | 341 | You know, I have seen learners that are confident, but they have no              |
|   | 342 | cooking clue what's numeracy. I'm one of them. [laughter]. <i>Therefore</i>      |
|   | 343 | <i>to have a learner who is confident in engaging with numeracy activities</i>   |
| P | 344 | activities, ja.  |
| R | 345 | <i>the role of the teacher in being understanding?</i>                           |
| P | 346 | Exciting.  |
| R | 347 | <i>helpful, exciting, to address the learners' language, and don't you think</i> |

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|   | 348 | we need to bring in here numeracy barriers? <i>And numeracy barriers are</i> |
|   | 348 | <i>vital.</i>  |
| P | 349 | Sociable, emotional and numeracy barriers, they are all barriers.            |
| R | 350 | The reason why I am focusing on the numeracy barriers                        |
| P | 351 | because that's what you are doing  |
| R | 352 | you get learners that, it is not only about prior, ja, it is about the prior |
|   | 353 | knowledge, but there is more to me there. A learner that hasn't, that        |
|   | 354 | makes an 8 wrongly, instead of being horizontally, it is lying vertically,   |
|   | 355 | is saying to me, that he hasn't had enough midline crossing. That's not      |
|   | 356 | about prior knowledge, it can be, but he hasn't internalized it.             |
|   | 357 | I think that no prior knowledge would be no prior numeracy knowledge,        |
| P | 358 | that is what that space [unclear]  |
| R | 359 | Okay, and then you feel all that numeracy ...                                |
| P | 360 | Ja, that was meant for numeracy.   |
| R | 361 | Okay, can I just read this so that you can see if we all agree? Or           |
|   | 362 | whether you want to add or change. <i>Feelings that are experienced by</i>   |
|   | 363 | <i>teachers and learners during numeracy are:</i> and we call all of them.   |
|   | 364 | <i>Learners must be ... Although a learner may feel challenged, learners</i> |
|   | 365 | <i>need to be challenged in numeracy activities to, for learning to take</i> |
|   | 366 | <i>place.</i>  |
| P | 367 | Uhm.   |
| R | 368 | <i>Although ...</i>  |

|   |     |  |
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| P | 369 | For new knowledge to be acquired.  |
| R | 370 | Okay, <i>to take place for new numeracy knowledge to be acquired.</i>          |
| P | 371 | Yes.   |
| R | 371 | Allright. Okay, <i>These insecurity can be because of no prior numeracy</i>    |
|   | 373 | <i>knowledge insecurity, emotional and social barriers as well as language</i> |
|   | 374 | <i>barriers being experienced by the learner. Therefore, the teacher</i>       |
|   | 375 | <i>Therefore, to have learners who are confident in engaging with</i>          |
|   | 376 | <i>numeracy activities, the role of the teacher is to be understanding,</i>    |
|   | 377 | <i>helpful, sharing, being excited to address the learners' language</i>       |
|   | 378 | <i>and numeracy barriers are vital. I just put that nicer.</i>                 |
| P | 379 | It needs to ensure that your presentation is, the teacher needs to ensure      |
|   | 380 | that her presentation of the material or of the lesson, I don't know how ...   |
| R | 381 | <i>of numeracy activities?</i>   |
| P | 382 | Yes.   |
| R | 383 | <i>are inviting,</i>   |
| P | 384 | All of those, inviting, exciting, fun,   |
| R | 385 | share, also the role again, <i>the role is to guide, to support.</i>           |
| P | 386 | Ja, be helpful, all those ones ...   |
| R | 387 | <i>and to encourage?</i>   |
| P | 388 | Ja.  |
| R | 389 | Goed. Everybody happy with this one?   |
| P | 390 | Mmm.   |

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| R | 391 | We go over to the next group and that one is <i>Extension/supplementary</i> .  |
|   | 392 | This is a very interesting theme for me. Okay, that's what I want              |
|   | 393 | to say. <i>Shopping?</i> Is that an activity you want the learners to go to?   |
|   | 394 | That they play shopping,   |
| P | 395 | Ja, play shopping or even ...  |
| R | 396 | They basically go to the shop and buy something there.                         |
| P | 397 | Ja.  |
| R | 398 | <i>Creative?</i>   |
| P | 399 | Creative activities.   |
| R | 400 | We've got <i>creative activities</i> .   |
| P | 401 | They're the same thing.  |
| R | 402 | It can also be that the learners can be creative, display their own            |
|   | 403 | creativity né?   |
| P | 404 | Ja.  |
| R | 405 | Not the set out creative activities.   |
| P | 406 | Creative thoughts.   |
| R | 407 | Creative thoughts.   |
| P | 408 | How we are going to share it?  |
| R | 409 | Yes. <i>Games, blocks, games, puzzles, rhymes, poems, creative activities,</i> |
|   | 410 | <i>drawings, songs, beads, dominoes, living?</i>                               |
| P | 411 | Numeracy is everyday living.   |
| R | 412 | <i>Everyday living, numeracy ...</i>   |

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| P | 413 | Or numbers in everyday living.   |
| R | 414 | <i>Movement?</i>   |
| P | 415 | Jump five times,   |
| R | 416 | You use the activity of this. <i>Nature?</i> Okay, do you feel that's      |
|   | 417 | extension? Supplementary? Or is that where you derive your numeracy        |
|   | 418 | from?  |
| P | 419 | No. If you talk about number 5, okay, say, go and look for all things that |
|   | 420 | got 5. How many flowers have got 5 petals?                                 |
| R | 421 | Okay,  |
| P | 422 | So, that's an extension to your number 5. You are actually going on a      |
|   | 423 | nature walk.   |
| R | 424 | And you use that... what you are actually saying to me, you integrate.     |
| P | 425 | Integration.   |
| R | 426 | Is integration with, as you say, everyday living. Or what else comes in?   |
|   | 427 | What is your understanding of extension or supplementary?                  |
| P | 428 | Extra.   |
| R | 429 | Extra? Enrichment?   |
| P | 430 | Ja, something added.   |
| R | 431 | Added. Remedial?   |
| P | 432 | Could be there to remediate. You can use it to remediate.                  |
| R | 433 | But your focus would not be on remedial, but enriching?                    |
| P | 434 | Enrichment activities.   |

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| R | 435 | Enrichment activities. This is quite interesting for me, because my idea       |
|   | 436 | of that was remedial. When I looked at the word extension,                     |
|   | 437 | supplementary, I thought immediately, remedial.                                |
| P | 438 | But it could be use for remedial as well.                                      |
| R | 439 | But that was not your idea. Yours was actually to enrich.                      |
| P | 440 | Ja.  |
| R | 441 | Make it a bit more depth, interesting and to bring in everyday life.           |
| P | 442 | So it is integrating activities basically.                                     |
| R | 443 | What do you want it to be?   |
| P | 444 | You mean we actually need to give it a heading? Enrichment activities.         |
| R | 445 | Enrichment activities?   |
| P | 446 | Ja. Why can't you say <i>Enrichment / remedial activities</i> , because that's |
|   | 447 | basically, you could use it for both.  |
| R | 448 | So it's not <i>Extension or Supplementary</i> ?                                |
| P | 449 | Eheh. In the old SA, in the old curriculum it would have been called           |
|   | 450 | <i>Extension</i> . Ja. In the old one, when we were trained, it was called     |
|   | 451 | extension.   |
| R | 452 | If you called it extension, how do you do it now? You do it now as             |
|   | 453 | enrichment.  |
| P | 454 | Ja, that's what I'm saying, it's just a change of words; it means the          |
|   | 455 | same thing, but it is just a change of vocab. Okay.                            |
| R | 456 | Give me a definition or a descriptive paragraph please. How do you feel?       |

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| P | 457 | [unclear] [laughter] I would say <i>Enrichment and/or remedial activities</i> ,      |
|   | 458 | <i>could include:</i> brrrrrrr, all of those.  |
| R | 459 | Why do you want to, <i>Enrichment or ?</i>   |
| P | 460 | <i>And/or remedial activities.</i> Bring me that nature, let's just put              |
|   | 461 | <i>nature walks</i> in. No, we just want to add <i>nature walks</i> , because nature |
|   | 462 | by itself ...  |
| R | 463 | It can be a nature table as well, it can be, you put in all those activities.        |
| P | 464 | Pardon?  |
| R | 465 | Why do you want to do this?  |
| P | 457 | Listen to me. <i>Enrichment and/or remedial ...</i>                                  |
| R | 468 | Why do you want to do that?  |
| P | 469 | Because you are going to have children who have barriers to learning                 |
|   | 470 | who would need that.   |
| R | 471 | That's what I wanted. Thanks, [laughter].  |
| P | 472 | Yo, must we spell it out for you, hey? [laughter]                                    |
| R | 473 | <i>Insure that learners are building concretely numeracy concepts.</i> Is that       |
|   | 474 | what you are saying? ... not building, but <i>are internalizing.</i> [unclear].      |
|   | 475 | <i>When we do this, we are actually coming back to the old education</i>             |
|   | 476 | <i>principles. Going from the known to the unknown,</i>                              |
| P | 477 | Basic didactics.   |
| R | 478 | Basic didactics. Because, the other thing is, also different activities. We          |
|   | 479 | want to teach the number concept 5 but through the daily programme,                  |

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|   | 480 | involving different activities. Not having them all doing number 5 and             |
|   | 481 | that's   |
|   | 482 | it. That's the focus on that, okay? But there's a lot of integration,              |
|   | 483 | can I just have the word <i>integration</i> , because there's a lot of things that |
|   | 484 | are coming here together. Any one wants to add to this one? Okay,                  |
|   | 485 | this one, values [unclear] values, shall we call this one values?                  |
| P | 496 | Perception. Perceptions of INSET.  |
| R | 487 | Current?   |
| P | 488 | Current.   |
| R | 489 | Current perceptions of INSET né?   |
| P | 490 | Ja. And experiences. It is not only a perception but also experiences.             |
| R | 491 | Then I'm going to say: <i>Perceptions and experiences of INSET. Suited</i>         |
|   | 492 | <i>for under-privileged only. I'll come back to this one. Sometimes</i>            |
|   | 493 | <i>excited [unclear] Very Basic! Relevant. Worthy. Very keen to attend.</i>        |
|   | 494 | <i>Vague. What I'm doing here now is ...</i>                                       |
| P | 495 | Positive and negative.   |
| R | 496 | Exactly. <i>Waste of time. Not alone. Looking for more stimulation.</i>            |
|   | 497 | <i>Beneficial. To know more about numeracy. Okay, here I have a</i>                |
|   | 498 | question mark. Give me clarity on this one. Did you come – was that                |
|   | 499 | for the expectation or is that still a need? How do you feel as a group?           |
|   | 500 | Anyone can answer.   |
| P | 501 | I think a need.  |

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| R   | 502                       | Is this still a need? Okay.  |
| P   | 503                       | Or for numeracy activities I think more so than just to be vague like that.    |
| R   | 504                       | Okay. <i>Sometimes scared</i> . This one is actually in the middle.            |
|     | 505                       | <i>To be open-minded</i> and what I actually see here, and [unclear]. All      |
|     | 506                       | these things what I am doing here, is going to form a table like this.         |
|     | 507                       | Where we will say certain things do this, this is the middle and this is       |
|     | 508                       | the example at the end. That is what we aim to do with this. But it            |
|     | 509                       | is interesting that it came out like this. When I start writing it up, I could |
|     | 520                       | help noticing that I am actually busy with the interpreting process            |
|     | 511                       | already. But okay, let's look here. Here we've got a positive and a            |
|     | 512                       | negative thing. For some teachers it was very positive; they felt it was       |
|     | 513                       | relevant, it was worth it, they were very keen to attend, and not alone, so    |
|     | 514                       | they felt group sisterhood, it was beneficial, it was enriching for them, to   |
|     | 515                       | be open in mind – is this a negative or a positive thing? Is this a criteria   |
| 516 | for attending [unclear] ? |  |
| P   | 517                       | Ja.  |
| R   | 518                       | I must put it under the positive things?                                       |
| P   | 518                       | Ja.  |
| R   | 519                       | Okay, do you agree with me that you feel this is positive and negative?        |
| P   | 520                       | Ja.  |
| R   | 521                       | Okay, here <i>Suited for under-privileged only</i> and I think these two go    |
|     | 522                       | together.  |

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|---|-----|---|
| P | 523 | Uhm.  |
| R | 524 | Under-privileged, do you mean people that have had limited or no              |
|   | 525 | numeracy training before?   |
| P | 526 | Yes.  |
| R | 527 | Okay, so <i>under-privileged</i> needs to be identified – no or limited       |
|   | 528 | previous numeracy INSET. Goed. <i>To know more about numeracy</i> – that      |
|   | 529 | is your need.   |
| P | 530 | Ja.   |
| R | 531 | Despite these things it was <i>vague</i> , - the course itself was vague. And |
|   | 532 | you need to know more about numeracy still. Some felt it was a total          |
|   | 533 | <i>waste of time. Looking for more stimulation</i> – because it was vague,    |
|   | 534 | you still don't know how to do numeracy. <i>Sometimes scared?</i> Someone     |
|   | 535 | wrote, why did you feel scared coming to the thing? Did you feel              |
|   | 536 | scared? No, don't answer me, I have no right; just give me a general          |
|   | 537 | thing, why do you think a person would feel sometimes scared?                 |
| P | 538 | I would think that a lot of people would feel scared coming to a              |
|   | 539 | workshop, because they are coming with no prior knowledge of the              |
|   | 540 | actual workshop that is to be presented.                                      |
| R | 541 | Unsure about content and way?   |
| P | 542 | Yes.  |
| R | 543 | And method?   |
| P | 544 | And methodologies. And that ties up with that top one.                        |

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| R | 545 | Over here?  |
| P | 546 | Because the workshops are not all [unclear]; some are geared for those        |
|   | 547 | people who got no training and the next workshop is dealing only for          |
|   | 548 | people who got formal training. Do you understand? Do you agree?              |
|   | 549 | Yes.  |
| R | 550 | Okay, why do you feel sometimes <i>excited</i> ?                              |
| P | 551 | Because WOW, something has been done for us. [unclear]                        |
| R | 552 | Because what have been done ...   |
| P | 553 | <i>Beneficial?</i>  |
| R | 554 | <i>Beneficial</i> for me to attend. And for me it is actually where they are. |
|   | 555 | Wow, I didn't think about that. That makes me excited. I mean                 |
|   | 556 | that is, there is lots of time that I didn't really know, even                |
|   | 557 | as a presenter from my side, [unclear]. Even when I come to classes,          |
|   | 558 | I never thought about this. You people are brilliant! [laughter].             |
|   | 559 | It makes one excited. Goed, a definition here, please. <i>Perceptions</i>     |
|   | 560 | <i>and experiences of ...</i>   |
| P | 561 | <i>current INSET training includes</i> : all those.                           |
| R | 562 | <i>Thus it is negative and... Thus it is being experienced ...</i>            |
| P | 563 | as both negative and positive. Inter alia, brrrrrr, all of those.             |
| R | 564 | Okay, I can't say anything more about it né? [unclear] Would you like         |
|   | 565 | to add something here? Nothing.   |
| P | 566 | Can I ... [unclear] motivation?   |

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|---|-----|--|
| R | 567 | You want to put up <i>motivation</i> because it is a new thing that teachers |
|   | 568 | experience?  |
| P | 569 | Ja.  |
| R | 570 | [unclear] the motivation one.  |
| P | 571 | That could also come under some people's experiences of some of              |
|   | 572 | the workshops that they have been to. That they come out, I put it there?    |
| R | 573 | At the bottom?   |
| P | 574 | Ja, I would say so.  |
| R | 575 | <i>Positive people felt that they were motivated.</i> The people that felt   |
|   | 576 | negative don't you think they also felt motivated at once stage? Or          |
|   | 577 | not at all? Were they demotivated all the time?                              |
| P | 578 | No, that's why they went. Because they were motivated; they wanted           |
|   | 579 | I think the majority of people go because they, you don't go if you are      |
|   | 580 | ... not motivated. That's definitely a middle one.                           |
| R | 581 | That is why it ...   |
| P | 582 | is a result. [unclear] . That's because you feel you waste time, you are     |
|   | 583 | not going to be motivated . Because you are motivated to want to know        |
|   | 584 | More. So on the whole,   |
| R | 585 | <i>It includes teachers wanted to attend INSET because ...</i>               |
| P | 586 | they are motivated?  |
| R | 587 | <i>They are being motivated to know more.</i>                                |
| P | 588 | To improve your classroom techniques or classroom management,                |

|   |     |  |
|---|-----|--|
|   | 589 | teaching strategies. To share with other teachers                        |
| R | 590 | <i>And know more and to share and learn from ...</i>                     |
| P | 591 | To collegiate is the word.   |
| R | 592 | I first got to go and see in the diary, the dictionary how you spell it, |
|   | 593 | [laughter]   |
| P | 594 | It's all phonetics [laughter].   |

## APPENDIX F

|  |
|--|
| <b>TRANSCRIPTION OF UNSTRUCTURED OPEN-ENDED FOCUS GROUP</b><br><b>INTERVIEW 3 –COASTAL GROUP B</b> |
|--|

R – Researcher, P – Participants

| P/R | Line | Discussion   |
|-----|------|--|
| R   | 1    | I want to thank you for participating in this project. I have given and    |
|     | 2    | explained about the consent form, that I do guarantee your                 |
|     | 3    | confidentiality, and your anonymity, and if, at any stage during this time |
|     | 4    | together this afternoon, you want to leave, you are more than welcome      |
|     | 5    | to do so. This is done voluntarily and I am not forcing anyone             |
|     | 6    | of you. May I ask your permission to make a recording of what is           |
|     | 7    | happening today, a voice recording, can I have that?                       |
| P   | 8    | Yes.   |
| R   | 9    | Thank you so much. Okay, let us start with this whole process, that we     |
|     | 10   | call Interactive Qualitative Analysis. What I am going to do is, I am      |
|     | 11   | going to ask you in a short while, to tell me about your experiences,      |
|     | 12   | about implementing numeracy. Now before you tell me about your             |
|     | 13   | experiences, I would like you to sit comfortably, close your eyes, take    |
|     | 14   | deep cleansing breaths, relax from your head, your neck, your shoulders,   |
|     | 15   | your body, your buttocks, your legs and knees, now to your ankles,         |
|     | 16   | your feet, your toes. I want you to clean your mind, put all your thoughts |

|    |   |
|----|---|
| 17 | of what is happening at home, what happened today, out of your mind. I    |
| 18 | want you to think of yourself in your classroom. Think of yourself in     |
| 19 | your classroom and think or focus on what you are hearing and seeing      |
| 20 | in your classroom. Where's your numeracy corner? Where's your             |
| 21 | literacy corner? Your life skills, your theme table, your educational     |
| 22 | toys? I want you now to focus and visualize on how and where and          |
| 23 | in which way you present numeracy in the classroom. Think about           |
| 24 | I am going to ask you to write for me whatever you think on those blue    |
| 25 | cards I have given you. You must please write in silence and not discuss  |
| 26 | it with your colleague. And write as many thoughts as possible that       |
| 27 | come into your mind on that piece of paper. The first one I am going to   |
| 28 | ask you, to think about or tell me what you think or feel or call to      |
| 29 | mind when I say the term numeracy? You can write on that piece of         |
| 30 | paper, that blue; what you are thinking or feeling or calling to mind     |
| 31 | when I use the term Numeracy? Any thing that come on to your mind.        |
| 32 | It can be a sentence on one page or just a word; one page for everything. |
| 33 | Write as many pages as possible. Anything that comes to your              |
| 34 | mind, if I say Numeracy. One thought, writing per page nè? Ja             |
| 35 | every new thought you put on a page. Don't fold it, you can just place    |
| 36 | it face up, ja, because we are going to put it up on the wall just now.   |
| 37 | As many thoughts as possible, but just one thought per page. That's why   |
| 38 | I have given you a lot of those blue papers. Whatever comes to your       |

|    |  |
|----|--|
| 39 | mind about Numeracy. Okay, I am going to give you another statement;       |
| 40 | I see some of you, what is the word, in Afrikaans we say, versadig,        |
| 41 | don't want to write anymore. It means that you are [unclear]. I am         |
| 42 | going to give you the next statement, I want you all to write on           |
| 43 | these pieces of paper. Tell me about your experiences, when                |
| 44 | you implement Numeracy. In your classroom, when you are                    |
| 45 | doing Numeracy, what are your experiences? What are your                   |
| 46 | what are you feeling about it, when are you doing it, how do               |
| 47 | you implement Numeracy in your classroom? If you think of your             |
| 48 | lesson today, what did you do in Numeracy? How did you implement it?       |
| 49 | One thing per page nè? It can be a sentence, it can be a word, it does     |
| 50 | not matter. As many as possible please. Let your brain just go!            |
| 51 | There is no right or wrong. How do you experience it? Okay, I am           |
| 52 | going to ask you about the last one. The last one, I am going to ask       |
| 53 | you to write about for me is: Tell me about your experiences, your         |
| 54 | feelings, your perceptions or your beliefs, about attending Numeracy       |
| 55 | In-service training. It does not matter if it has been the District Office |
| 56 | giving you training, or NGO's or RUMEP or what was this                    |
| 57 | other one that you attend classes on Saturdays? SAMS? Anywhere,            |
| 58 | it does not matter where and when, but anywhere you got                    |
| 59 | Numeracy training. What are your feelings about it? How did you            |
| 60 | experience it? When you got there, were you happy or were you unhappy?     |

|   |    |   |
|---|----|---|
|   | 61 | How did you feel about it? When you finished there, how                   |
|   | 62 | did you feel about it? How do you feel now? Do you need some              |
|   | 63 | more or do you feel you are alright? Just anything about your             |
|   | 64 | training that you had. It does not matter where you had it.               |
|   | 65 | Thank you ladies. Now I want you to, still in silence, and there after,   |
|   | 66 | we will discuss it. I am going to give you each a little bit of prestik,  |
|   | 67 | please go and put your cards up on the board over there. And we           |
|   | 68 | will discuss it, just now. Thank you so much, let me just give you        |
|   | 69 | some prestik here. This is the most writing you've got to do. You         |
|   | 70 | want some more? This is all the writing you had to do. If you             |
|   | 71 | need some more, you will tell me nè?                                      |
|   | 72 | Thank you ladies, for putting up all your cards on the board over there.  |
|   | 73 | What we are going to do now is, I am going to go through each             |
|   | 74 | of those cards, just so that we can get a common understanding.           |
|   | 75 | But now I want you to discuss with me, about, if I ask you a question,    |
|   | 76 | for clarity about these cards. Even if you did not write a card, this     |
|   | 77 | is no more your individual cards. This is all of us, anyone may say       |
|   | 78 | anything about those cards. I am just going through it, to make sure that |
|   | 79 | we have a common understanding of everything. Let's start over here,      |
|   | 80 | counting, we all understand that one? Manipulatives? Are we talking       |
|   | 81 | about educational toys here?  |
| P | 82 | Yes.  |

|   |     |  |
|---|-----|--|
| R | 83  | Or any educational resources nè?   |
| P | 84  | Yes.   |
| R | 85  | Goed. Enjoyment, active involvement, of the learners?                    |
| P | 86  | Of the learners.   |
| R | 87  | Sharing, working as a team or a group, taking turns, I use counting      |
|   | 88  | objects like ...   |
| P | 89  | Bottle tops, counters etcetera, some learners are not confident,         |
|   | 90  | need help and ...  |
| R | 91  | Support. Do we all understand that?                                      |
| P | 92  | Yes.   |
| R | 93  | Learners are helping each other in terms of counting and bringing the    |
|   | 94  | number of objects needed. I feel that I do a great job. I usually use    |
|   | 95  | learners as resources. Happy 'cause I gained some knowledge as far       |
|   | 96  | as numeracy is concerned. I wish more workshops to be conducted in       |
|   | 97  | numeracy. This one clear? Anyone not understanding here? Let's go        |
|   | 98  | over to this lot. I'm just starting over here. Morning ring, days of the |
|   | 99  | week calendar, shapes, snack time, puzzles, music ring, creative         |
|   | 100 | activities, maths, counting, sequencing, colours, scale, volume,         |
|   | 101 | measuring, I need more training around numeracy, register, I am          |
|   | 102 | feeling OK when I got training, seasons of the year, taking              |
|   | 103 | turns, communication, collection, sharing, shapes, ideas, colours,       |
|   | 104 | counting, I feel good because I have learnt how to implement numeracy    |

|   |     |  |
|---|-----|--|
|   | 105 | at Grade R level, I enjoyed it because we implement it through               |
|   | 105 | playing games, snack time, weather, morning ring, days of the week,          |
|   | 107 | learners can count 1 to 10 orally, days of the months, using objects to      |
|   | 109 | count, difficult to count backwards. Okay, let's go on to this group,        |
|   | 110 | it entails: four seasons of the year, I feel very nice when I learned        |
|   | 111 | more about numeracy, first I was shy but after I feel free because I         |
|   | 112 | started to learn numeracy, because most of the time I use counting, I        |
|   | 113 | think it is good for learners to use fingers, measurement, we always use     |
|   | 114 | counting thumbs, sandpit, counting is good, always count, bright colours,    |
|   | 115 | bottle tops, straws, days of the week, creative activities, in swings        |
|   | 116 | measurement, birthdays, colouring in, sequencing, music ring,                |
|   | 117 | movement, weight, shapes, volume, counting, story time, measuring,           |
|   | 118 | using [unclear], making register. What is this one?                          |
| P | 119 | Marking register.  |
| R | 120 | Marking register, months of the year, days of the week, in the morning       |
|   | 121 | during morning ring, played out, play-dough?                                 |
| P | 122 | Mm.  |
| R | 123 | I need more training about numeracy, stones, seasons of the year.            |
|   | 124 | Okay, I'm very happy with this. What I am going to ask you to do             |
|   | 125 | now again, this time, silently again, you are going to go to all these ones, |
|   | 126 | and you are going to decide which cards belong as a group together. Let      |
|   | 127 | us look at the example of yellow, where we had pineapples and apples,        |

|   |     |  |
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|   | 128 | as a group together. That is what I want you to do here. Everybody         |
|   | 129 | goes individually and places the cards where they want, where you think    |
|   | 130 | it must be. But it might be, that mam over there, decides the card must be |
|   | 131 | there and you decide, no, I don't want it over there, but she comes and    |
|   | 132 | puts it back there, and she comes and place it at another place, that is   |
|   | 133 | fine. It will fall into a pattern, you will now see. Okay, so please come. |
|   | 134 | And remember, we will discuss it when we finished grouping of these.       |
|   | 135 | Just go and put it over there, that wall as well, and can I take that off  |
|   | 135 | mam?   |
| P | 137 | Yes.   |
| R | 138 | Okay, and I will put it back again.  |
| P | 139 | Yes.   |
| R | 140 | Okay, ladies if you just come and put it where you want it.                |
| P | 141 | Everyone decides for himself.  |
| R | 142 | Ladies, we have now grouped this together. Let's start with this group.    |
|   | 143 | I am just going to go through it to make sure that we all want it in this  |
|   | 144 | group or that group. In this one, we had ideas, learners are helping       |
|   | 145 | each other in terms of counting and drawing the number of objects          |
|   | 146 | needed, I feel that I am doing a great job,                                |
| P | 147 | Take that one.   |
| R | 148 | Must I take it off? Where must I take it? Over there?                      |
| P | 149 | Yes.   |

|   |     |   |
|---|-----|---|
| R | 150 | I will start learning numeracy,                                       |
| P | 151 | [unclear]   |
| R | 152 | You also feel it is part of over here? Goed, working as a team/group, |
|   | 153 | active involvement, some learners are confident but others need more  |
|   | 154 | help, I think it is good for learners, difficult to count backwards.  |
|   | 155 | Everybody happy with this group?                                      |
| P | 156 | Ja.   |
| R | 157 | Okay, do you want to give this group a heading now? You feel you      |
|   | 158 | can give this group a heading? That group over there? The ideas...    |
|   | 159 | If you think of this group, it's about?                               |
| P | 160 | helping each other,   |
| R | 161 | Who is helping each other?  |
| P | 162 | The learners are helping each other.                                  |
| R | 163 | So it's about learner ...   |
| P | 164 | Active involvement.   |
| R | 165 | Learner involvement nè?   |
| P | 166 | Mmm.  |
| R | 167 | And they can be active, as a group over here,                         |
| P | 168 | Yes.  |
| R | 169 | And some of them, need support. So this can also have some barriers   |
|   | 170 | to learning. Do you agree with me? You feel that you want this        |
|   | 171 | as heading: Learner Involvement?                                      |

|   |     |  |
|---|-----|--|
| P | 172 | Yes.   |
| R | 173 | Okay, we will do just now, write a descriptive paragraph of this one.    |
|   | 174 | Let's do the easy ones, quickly first. This one is about weight,         |
|   | 175 | measurement, volume, days of the week, I got two volumes, I just put all |
|   | 176 | the volumes together, we've got two weight, measurement four times,      |
|   | 177 | measurement, we've got sandpit, must I put it here for the time being?   |
| P | 178 | Yes.   |
| R | 179 | We've got learners can count 1 to 10 orally, because most of the         |
|   | 180 | time I use counting, [unclear] count, shapes, shapes, counting, then     |
|   | 181 | again shapes, counting, counting, counting counting, colours, sharing?   |
| P | 182 | To learner involvement.  |
| R | 183 | You feel it must go to learner involvement?                              |
| P | 184 | Yes.   |
| R | 185 | Okay, days of the week, creative activities, do you want this one to be  |
|   | 186 | split?   |
| P | 187 | Into two.  |
| R | 188 | So we will have on this one, days of the week and here we will           |
|   | 189 | have creative activities. If we look at this group, what do you think,   |
|   | 190 | what heading can we put here? Weight, measure, shapes, counting,         |
|   | 191 | I said time measurement and time, that is where the data measurement     |
|   | 192 | comes in, volume is under measurement, age is under measurement,         |
|   | 193 | counting, LO 1, shapes, colours, what do you call, is this what you      |

|   |     |   |
|---|-----|---|
|   | 194 | want learners to know at the end of the year?                             |
| P | 195 | Uhm.  |
| R | 196 | Or is this activities that you are doing with them? Is it what they know? |
| P | 197 | They must do all that.  |
| R | 198 | They must be able to measure, because you want to teach them, so          |
|   | 199 | that is an outcome.   |
| p | 200 | An outcome.   |
| R | 201 | Shall we call this Outcomes?  |
| P | 202 | Yes.  |
| R | 203 | Okay. In this one, we've got enjoyment, taking turns,                     |
|   | 204 | collection, communication?  |
| P | 205 | Take it to learner involvement.   |
| R | 206 | Learner involvement? You feel the same? Okay, it goes over there.         |
|   | 207 | Now, this one says, morning ring, days of the week, calendar,             |
|   | 208 | in the morning during morning ring, birthdays,                            |
|   | 209 | months of the year,   |
|   | 210 | marking registers, snack time, working in groups?                         |
| P | 211 | That one there.   |
| R | 212 | This one here? Register, seasons, creative activities, days of the week,  |
|   | 213 | morning ring, weather, snack time, creative activities, seasons of the    |
|   | 214 | year, maths and sandpit. What do you want here as a heading?              |
|   | 215 | Morning rings, birthdays, registers, snack times, sandpit, creative       |

|   |     |   |
|---|-----|---|
|   | 216 | activities, where's the one that you said this [unclear]?               |
| P | 217 | I can say that is what we do in the programme ...                       |
| R | 218 | The daily programme?  |
| P | 219 | Yes.  |
| R | 220 | The daily programme. Is everybody feeling like that?                    |
| P | 221 | Yes.  |
| R | 222 | This is how you do it in the daily programme. Okay, sequencing          |
|   | 223 | story time, puzzles, movement, puzzles? Other side nè? But the          |
|   | 224 | [unclear] must stay here.   |
| P | 225 | Story time must move.   |
| R | 226 | Yes, story time is daily programme. Sequencing goes over there?         |
| P | 227 | Yes.  |
| R | 228 | You would rather it goes over there?                                    |
| P | 229 | Mm.   |
| R | 230 | Music ring. Puzzles, also over here? And movement. Okay, now            |
|   | 231 | we are going to do this one. Puzzles, cubes, stones, sequencing,        |
|   | 232 | bright colours, bottle tops, tyres, play dough, use objects to count,   |
|   | 233 | manipulatives, use learners as resources. What would you call that one? |
| P | 234 | Resources.  |
| R | 235 | Resources?  |
| P | 236 | Mm.   |
| R | 237 | Sorry, did you want to say something else? You want to say resources?   |

|   |     |  |
|---|-----|--|
| P | 238 | Mm.  |
| R | 239 | Another word for resources?  |
| P | 240 | Resources.   |
| R | 241 | Only resources? Educational resources? Not necessarily, just               |
|   | 242 | resources. Numeracy resources?   |
| P | 243 | Just resources.  |
| R | 244 | Just resources. Okay. Now this one over here. The first time I was shy     |
|   | 245 | but now I feel free, I'm feeling OK, When I got training I feel            |
|   | 246 | good because I learnt how to implement, happy 'cause I gained some         |
|   | 247 | knowledge, I feel very nice and learnt more about numeracy, I enjoyed it   |
|   | 248 | because we implement it through play and games, I wish more                |
|   | 249 | workshops to be conducted, I need more training on numeracy,               |
|   | 250 | I need more training, 'cause I will start learning numeracy, I feel that I |
|   | 251 | am doing a great job. This is about you,                                   |
| P | 252 | Yes.   |
| R | 253 | As a teacher?  |
| P | 254 | Yes.   |
| R | 255 | What shall we call this? Teachers' attitudes, feelings?                    |
| P | 256 | Yes.   |
| R | 257 | Teachers' feelings? Is everybody agreeing with that?                       |
| P | 258 | Teachers' experiences when they do numeracy because there is one           |
|   | 259 | that say I was shy, so it's teachers' experiences.                         |

|   |     |   |
|---|-----|---|
| R | 260 | Teachers' experiences.  |
| P | 261 | Yes.  |
| R | 262 | Are you happy with that?  |
| P | 263 | Yes.  |
| R | 264 | Thank you ladies. What you have done, you have identified five topics   |
|   | 265 | on which we can focus on in the research further, when I do             |
|   | 266 | one to one interviews. All we need now to do is writing up a little     |
|   | 267 | descriptive paragraph of each group. I will assist you with it because  |
|   | 268 | it takes a long time to write up. Let's start with the easy ones. Which |
|   | 269 | one is the easy one?  |
| P | 270 | Resources.  |
| R | 271 | Resources. I am not going to repeat everything here. Let us just        |
|   | 272 | say that resources, all these nè, can be used to enhance numeracy       |
|   | 273 | experiences for learners? What do you feel? Come, in your own words.    |
| P | 274 | To make it more interested.   |
| R | 275 | More interested. Resources can be used to make numeracy                 |
|   | 276 | experiences for learners more interesting?                              |
| P | 277 | Mm.   |
| R | 278 | I see over there stone, straws, I see bottle tops, so it is very much?  |
| P | 279 | Concrete.   |
| R | 280 | Concrete nè? For learners more interesting and to use concretely, nè    |
| P | 281 | Mm.   |

|   |     |  |
|---|-----|--|
| R | 282 | Concretely. Why? Why do you want to use it concretely? To lay the        |
|   | 283 | foundation for further learning nè?                                      |
| P | 284 | To be used concretely.   |
| R | 285 | To be used concretely in order to build up numeracy, in order to         |
|   | 286 | experience . Let me rephrase. Resources can be used to make              |
|   | 287 | numeracy experiences for learners interesting. It can be used concretely |
|   | 288 | in order for learners to experience and explore numeracy concepts.       |
|   | 289 | Because that is what you are actually doing. You are preparing           |
|   | 290 | the learner to master numeracy concepts. It must be done                 |
|   | 291 | creatively and concretely. But I also like there, somebody wrote they    |
|   | 292 | use the body, so it's concretely but also with the body, before          |
|   | 293 | two-dimensional and abstract is introduced. What we are                  |
|   | 294 | actually saying here is, we must have a variety of activities that       |
|   | 295 | are interesting, that will let the learner be involved concretely and    |
|   | 296 | with their bodies. Once we have done that, we can start                  |
|   | 297 | two-dimensional, that's with puzzlers and worksheets. Resources play     |
|   | 298 | a vital role in this.  |
| P | 299 | That is our level, Grade R, they need to touch and feel.                 |
| R | 300 | And feeling concretely is very important. We jump too quickly            |
|   | 301 | to worksheets.   |
| P | 302 | Mmm.   |
| R | 303 | Goed, is everyone happy with this definition?                            |

|     |     |  |
|-----|-----|--|
| P   | 304 | Yes.   |
| R   | 305 | The next one, which one must we go now to? Let's do the easy ones      |
|     | 306 | first.   |
| P   | 307 | The daily programme.   |
| R   | 308 | The daily programme, Okay. What can we say about the daily             |
|     | 309 | programme? Why are we having a daily programme?                        |
| P   | 310 | To guide us.   |
| R   | 311 | To guide us. The daily programme is to guide the teachers? And         |
|     | 312 | the learners nè?   |
| P   | 313 | Yes.   |
| R   | 314 | And learners in presenting activities. With this thing I saw           |
|     | 315 | you can have numeracy activities, numeracy concepts,                   |
|     | 316 | integrated into the different activities. Because you got a music ring |
|     | 317 | where we sang counting songs, you've got sandpit, where they play      |
|     | 318 | outside and measure, we've got snack time, where you count the         |
|     | 319 | shapes of the bread, how many bread do you want? How full is your      |
|     | 320 | glass? So, can we say, the daily programme is to guide teachers and    |
|     | 321 | learners in presenting activities which are integrated. Why do we      |
|     | 322 | also have a daily programme?   |
|     | P   | 323  |
| 324 |     | that you cannot know what to do.                                       |
| R   | 325 | It gives you a framework.  |

|   |     |   |
|---|-----|---|
| P | 326 | Framework.  |
| R | 327 | A framework for the teacher but also for the learners. Because          |
|   | 328 | learners are getting security, they know what is going to happen        |
| P | 329 | Mm,   |
| R | 330 | Communication, active involvement, working as a team or group,          |
|   | 331 | some are confident, some need support, difficult to count backwards,    |
|   | 332 | taking turns, sharing, ideas. How are we going to use this?             |
|   | 333 | Learner involvement means that ...                                      |
| P | 334 | Learners be actively involved.  |
| R | 335 | Actively involved and communicating ideas and feelings and experiences. |
| P | 336 | In learner involvement, you pick up the barriers to learning.           |
| R | 337 | Show you learners with barriers to learning nè?                         |
| P | 338 | Barriers in numeracy, sometimes you will use resources there but        |
|   | 339 | there will be times when they count orally, but when they need to use   |
|   | 340 | resources, in two's, they cannot.                                       |
| R | 341 | Okay, can count orally but cannot demonstrate counting one to one.      |
|   | 342 | It is also about sharing, where learners learn to share and to help     |
|   | 343 | one another.  |
| P | 344 | Mmm.  |
| R | 345 | Even to assist with learners who are having barriers. Because           |
|   | 346 | sometimes, the best way a child learns, is learning from another child. |
| P | 347 | Yes.  |

|   |     |   |
|---|-----|---|
| R | 348 | Assist with peer learning.  |
| P | 349 | Working as a group.   |
| R | 350 | That is where the sharing also comes in. But sometimes individually,    |
|   | 351 | there must be that balance. I want to come back there – Learners        |
|   | 352 | are not confident, needs help and support, difficult to count backwards |
|   | 353 | but you've said you will pick that up with learner involvement.         |
|   | 354 | Not confident, not participating in activities, you will pick that up.  |
| P | 355 | Mmm.  |
| R | 356 | But it can also help them, because some are confident, do you think     |
|   | 357 | it is good for learners to be involved in a group situation?            |
| P | 358 | Yes, yes. What I need to say is,  |
| R | 359 | What are you doing when learners are not involved?                      |
| P | 360 | I was saying that, when children are working in a group, it is easy     |
|   | 361 | for the teacher to identify, which one is shy and working in a          |
|   | 362 | group, there is sometimes this one that is not involved and you even    |
|   | 363 | pick up the shy ones and the bully ones.                                |
| R | 364 | Ja. Anything else?  |
| P | 365 | Sometimes, those ones who are helping one another becomes confident,    |
| R | 366 | through peer teaching.  |
| P | 367 | And it makes you as a teacher confident.                                |
| R | 368 | This learner involvement means that you take the lead from the learners |
|   | 369 | nè?   |

|   |     |  |
|---|-----|--|
| P | 370 | Yes.   |
| R | 371 | You look at them, and you see sometimes how you must adapt               |
|   | 372 | your programme. Learners' involvement is learner-centred and learner-    |
|   | 373 | paced. Learning Outcomes, what are we saying about the learning          |
|   | 374 | outcomes? Earlier we did start raising it, when we said it is what we    |
|   | 375 | want learners to do, to achieve nè? And demonstrate to you and           |
|   | 376 | understanding and the skills. If you think of Learning Outcomes, where   |
|   | 377 | do you get these outcomes?   |
| P | 378 | You get it from your theme.  |
| R | 379 | It can be based on the theme, a topic but what about your ...            |
| P | 380 | Assessment.  |
| R | 381 | Assessment standards, that will be what you are assessing learners on    |
|   | 382 | nè?  |
| P | 383 | Yes.   |
| R | 384 | The learning outcomes are what the learners must achieve and             |
|   | 385 | demonstrate their understanding and skills based on the topic as         |
|   | 386 | well as the assessment standards that you will be assessing learners on. |
| P | 387 | This is where they develop, they can count, they can measure, so         |
|   | 388 | they develop.  |
| R | 389 | Develop learners numeratically, to be numerate at the end of the day.    |
|   | 390 | This guides you, guides teachers.  |
| P | 391 | You must know what to achieve at the end of the day                      |

|   |     |   |
|---|-----|---|
| R | 392 | to achieve at the end of the day and to plan for?                           |
| P | 393 | Yes.  |
| R | 394 | Anything else? Is everyone happy?   |
| P | 395 | Yes.  |
| R | 396 | The Teachers' experiences are the last one we still got to do and           |
|   | 397 | what are we saying here is: For the first time I was shy, but now I am      |
|   | 398 | free, I am feeling OK, When I am trained I feel good because I learnt       |
|   | 399 | how to implement numeracy, I implement numeracy through play                |
|   | 400 | and games, I am doing a great job because I start to learn numeracy.        |
|   | 401 | Shall we put all of this all under Teachers' Experiences? Teachers'         |
|   | 402 | experiences of numeracy were when I attend workshops for the first          |
|   | 403 | time I was shy but we have gained a lot of knowledge. We are happy          |
|   | 404 | about it because it built our self-confidence but we still need more        |
|   | 405 | training. There are still gaps in numeracy that we need to be trained on.   |
|   | 406 | Are you happy with that?  |
| P | 407 | Yes.  |
| R | 408 | What we are going to do now is to look at those themes, and to              |
|   | 409 | put it in a relationship, that you say this one is influencing this one and |
|   | 410 | that one is influencing that one. Let me give you an example. I am          |
|   | 411 | going to do it with you, here on the floor. And it will be about            |
|   | 412 | majority rules. Let us get our themes. Our first one is ...                 |
| P | 413 | Daily Programme.  |

|   |     |  |
|---|-----|--|
| R | 414 | Number 1: Daily Programme. Number 2?               |
| P | 415 | Learner Involvement.                               |
| R | 416 | Our number 2 is Learner Involvement. Our number 3: |
| P | 417 | Resources.   |
| R | 418 | Number 4:  |
| p | 419 | Learning Outcomes.                                 |
| R | 420 | And number 5?                                      |
| P | 421 | Teachers' experiences.                             |

## APPENDIX G

|   |
|---|
| <b>TRANSCRIPTION OF AN UNSTRUCTURED OPEN-ENDED FOCUS GROUP</b><br><b>INTERVIEW 1 [PILOT GROUP]: INTERVIEW FRAMEWORK</b> |
|---|

| Theme                | Segments: Brainstorming teachers' beliefs, experiences , knowledge and feelings   | Descriptive Paragraph  |
|----------------------|---|--|
| Barriers             | <ul style="list-style-type: none"> <li>▪ Language barriers</li> <li>▪ Limits</li> <li>▪ More paper work</li> <li>▪ Prevent blockage to learning</li> <li>▪ Progress</li> <li>▪ Re-inforcing</li> <li>▪ Repetition</li> <li>▪ Should not be leaving out stages e.g. abstract too soon</li> <li>▪ Workbooks = formal careful</li> </ul> | <p>To alert educators to possible problems. To plan lesson around barriers e.g. child with language barriers learn quicker with visual aids. Repetition in stills better learning, especially for learners with a second language. There is a lot of paperwork which can become a barrier – instead of teaching, the teacher and learner are too involved with paperwork. It must be practical. It is important to understand concrete concepts before moving on to abstract concepts.</p> |
| Classroom Atmosphere | <ul style="list-style-type: none"> <li>▪ Change to build relations</li> <li>▪ Children enjoy it</li> <li>▪ Confused</li> <li>▪ Correct atmosphere – relaxed – important</li> <li>▪ Eager</li> <li>▪ Encouraging</li> <li>▪ Enjoyment</li> <li>▪ Enlightening</li> <li>▪ Excited</li> </ul>  | <p>Set the stage for positive learning. A positive atmosphere encourages learning. Then learners will feel free to experience with numeracy. If teachers is A word of encouragement leads to better learning. A lot of experimentation and patience: do not shout when a child does not understand. If a teacher is feeling negative towards numeracy activities, learners will pick it up and will not enjoy numeracy activities.</p>   |

|                      |  |  |
|----------------------|--|--|
|                      | <ul style="list-style-type: none"> <li>▪ Important to develop as person and future citizen</li> <li>▪ It's fun</li> <li>▪ Noisy</li> <li>▪ Open to learning</li> <li>▪ Positive</li> <li>▪ Atmosphere positive</li> <li>▪ Positive interaction</li> <li>▪ Positive self esteem</li> <li>▪ Positive participation</li> <li>▪ Understanding</li> <li>▪ Use creative thinking</li> </ul>  |  |
| Classroom Activities | <ul style="list-style-type: none"> <li>▪ Back to front numbers</li> <li>▪ Colours – different by putting together the matching objects and count them</li> <li>▪ Counting</li> <li>▪ Counting games</li> <li>▪ Counting objects</li> <li>▪ counting practical</li> <li>▪ Counting songs</li> <li>▪ Dramatising rhymes</li> <li>▪ Games</li> <li>▪ Geostats</li> <li>▪ How many months in the year – the learners must use their fingers to name one by one</li> <li>▪ Puzzles</li> </ul> | <p>Do not do activity as activity but it should stimulate learners' interest. Activities should go with the theme/topic you are dealing with. All work and no play makes John a dull boy. Teachers should ensure that activities cover all areas of development, e.g. physical, social, mentally. Learners should be involved in all activities as individuals, pairs or in groups. Learners must be motivated and stimulated by the classroom activities. Through activities the teacher will be able to identify special needs. Concepts should be concrete and based on Learning Outcomes and Assessment Standards.</p> |

|          |   |                                    |
|----------|---|------------------------------------|
|          | <ul style="list-style-type: none"> <li>▪ Rhymes</li> <li>▪ Solve problems by themselves</li> <li>▪ Sorting</li> <li>▪ Threading beads</li> <li>▪ Using learners themselves by counting how many in their small groups</li> </ul> <p>Using months in a year by naming them</p>   |                                    |
| Concepts | <ul style="list-style-type: none"> <li>▪ Colours</li> <li>▪ Concepts</li> <li>▪ Concrete</li> <li>▪ Concrete experience</li> <li>▪ Comparisons</li> <li>▪ Cups different sizes</li> <li>▪ Days of the week</li> <li>▪ Few</li> <li>▪ Figures</li> <li>▪ Less</li> <li>▪ Many</li> <li>▪ Measurement</li> <li>▪ More/less</li> <li>▪ More</li> <li>▪ Numbers</li> <li>▪ Number concept</li> <li>▪ Quantity</li> <li>▪ Seriation</li> </ul> | no descriptive paragraph was given |

|                       |  |   |
|-----------------------|--|---|
|                       | <ul style="list-style-type: none"> <li>▪ Shapes</li> <li>▪ Shapes and sizes</li> <li>▪ Sizes</li> </ul>  |   |
| Learners' Involvement | <ul style="list-style-type: none"> <li>▪ Feel – they love route learning</li> <li>▪ It important for learners</li> <li>▪ Involvement</li> <li>▪ Learners must think for themselves</li> <li>▪ Learner participation</li> <li>▪ Need to prepare them</li> <li>▪ Numeracy involves the learner more than the educator</li> <li>▪ Problem solving</li> <li>▪ Thinking</li> <li>▪ We are surrounded with numeracy</li> </ul> | Teachers must be enthusiastic – otherwise learners will pick it up and also be negative. Continuous assessment leads to learner progression. The educator should recognize learners' prior knowledge. The teacher as facilitator will insure their positive involvement. They learn best when they use their senses. Encourage learners to think from themselves. Learners learn better when they participate in small group activities. Let learners explore on their own – problem solving. |
| Planning              | <ul style="list-style-type: none"> <li>▪ Also to make your own resources</li> <li>▪ Good preparation</li> <li>▪ How to present activities to learners</li> <li>▪ Incidental reading/doing numeracy</li> <li>▪ Learned about resources and how to use it</li> <li>▪ Must plan activities</li> <li>▪ Time of day when numeracy activities are presented is important</li> </ul>  | Definition: The preparation to present the lesson. Good planning ensures optimal learning. I plan what I want my learners to achieve. Good planning involves relevant resources. The time of day is important as mental work should take place earlier than later in the day – one needs to plan for this.  |
| Teacher's attitude    | <ul style="list-style-type: none"> <li>▪ I asked a lot of questions as I was afraid of how I am going to deliver to a child</li> <li>▪ I believe it will lead the young ones to greener pasture</li> <li>▪ I feel that it was really important to teach</li> </ul>   | Positive attitude towards Numeracy encourages learners to be actively involved in activities. Workshops learn new ideas for the development of the children. The teacher must make activities fun for the learners to do. The teacher must be positive  |

|  |  |  |
|--|--|--|
|  | <p>learners to count using days of the week</p> <ul style="list-style-type: none"> <li>▪ I feel that the learners are learning best by doing it practical</li> <li>▪ Some learn it through rhymes</li> <li>▪ I felt miserable at my first workshop</li> <li>▪ I involve myself in activities with other grade R educators to gain insight</li> <li>▪ I never figure out how I am going to implement it then</li> <li>▪ I then solve some problems with mathematical skills</li> <li>▪ Learned new ideas</li> <li>▪ See wider picture</li> <li>▪ Think my learners have a numeracy background and unaware</li> <li>▪ Workshops were always interested and fun.</li> </ul> | <p>to change (I never figure, I felt miserable). Get a lot of clarity at the workshops, things we didn't understand. Prior knowledge and knowing the child's background and his potential. Interaction with other Grade R educators brings a lot of change because it enlightens the teachers.</p> |
|--|--|--|

## APPENDIX H

**TRANSCRIPTION OF AN UNSTRUCTURED OPEN-ENDED FOCUS GROUP  
INTERVIEW 2 [COASTAL GROUP A] : INTERVIEW FRAMEWORK**

| Theme   | Segments: Brainstorming teachers' beliefs, experiences , knowledge and feelings   | Descriptive Paragraph  |
|---------|---|--|
| Content | <ul style="list-style-type: none"> <li>• Colours</li> <li>• Doubling</li> <li>• Constructing</li> <li>• Numbers [3x]</li> <li>• Counting [5x]</li> <li>• Sequencing [2x]</li> <li>• Shapes [2x]</li> <li>• Data handling</li> <li>• Mathematics</li> <li>• Mass [2x]</li> <li>• Concrete Apparatus</li> <li>• Patterns [2x]</li> <li>• Estimation [2x]</li> <li>• Halving</li> <li>• Sorting</li> <li>• More, less, equal</li> <li>• Balancing</li> <li>• Measurement [2x]</li> </ul> | <p>Numeracy includes the acts of identifying, constructing, building and reproducing of Colours, Doubling. Constructing, Numbers, Counting, Sequencing, Shapes, Data handling, Mathematics, Mass, Concrete Apparatus, Patterns, Estimation, Halving, Sorting, More, less, equal, Balancing, Measurement, Collecting, Foundation for later abstract thoughts and visualizing, Think and reason</p> <p>by the Grade R learner in concrete form, in order to lay a numeracy foundation for later abstract thinking and reasoning.</p> |

|                                      |   |   |
|--------------------------------------|---|---|
|                                      | <ul style="list-style-type: none"> <li>• Collecting</li> <li>• Foundation for later abstract thoughts and visualizing</li> <li>• Think and reason</li> </ul>  |   |
| Enrichment and remedial activities   | <ul style="list-style-type: none"> <li>• Rhymes [2x]</li> <li>• Creative Activities [2x]</li> <li>• Shopping</li> <li>• Poems</li> <li>• Beads</li> <li>• Dominoes</li> <li>• Movement</li> <li>• Integration</li> <li>• Nature table / nature walks</li> <li>• Drawings</li> <li>• Songs</li> <li>• Games [2x]</li> <li>• Blocks</li> <li>• Puzzles</li> <li>• Numbers in everyday living</li> </ul> | <p>Enrichment and/or remedial activities could include: Rhymes, Creative Activities, Shopping, Poems, Beads, Dominoes, Movement, Integration, Nature table / nature walks, Drawings, Songs, Games, Blocks, Puzzles, Numbers in everyday living.</p> <p>In order to ensure that learners are internalizing concretely numeracy concepts and experience it as everyday life's activities.</p> |
| Perceptions and experiences of INSET | <ul style="list-style-type: none"> <li>• Looking for more stimulation</li> <li>• Sometimes scared, thus unsure about content or methodology of INSET workshop</li> <li>• Not limited, previous numeracy inset was suited for underprivileged only</li> <li>• Very basic!</li> </ul>   | <p>Perceptions and experiences of INSET include looking for more stimulation; Sometimes scared, thus unsure about content or methodology of INSET workshop; Not limited, previous numeracy inset was suited for underprivileged only; Very basic! Need to know more about numeracy; Waste of time; Motivated; Vague; Sometimes</p>  |

|          |  |   |
|----------|--|---|
|          | <ul style="list-style-type: none"> <li>• Need to know more about numeracy</li> <li>• Waste of time</li> <li>• Motivated</li> <li>• Vague</li> <li>• Sometimes excited</li> <li>• To be open in mind</li> <li>• Not alone</li> <li>• Worth it</li> <li>• Relevant</li> <li>• Very keen to attend</li> <li>• Beneficial</li> </ul> | <p>excited; To be open in mind; Not alone; Worth it; Relevant; Very keen to attend; Beneficial.</p> <p>Thus it is being experienced positively and negatively. Teachers want to attend INSET because of being motivated to improve their teaching strategies and to know more as well as to share and learn [with other words to collegiate with one another].</p>  |
| Feelings | <ul style="list-style-type: none"> <li>• Happy [2x]</li> <li>• Encouraged</li> <li>• Comfortable</li> <li>• Laughter</li> <li>• Life</li> <li>• Confident</li> <li>• Fun [2x]</li> <li>• Look!</li> <li>• Sharing</li> <li>• Language barriers</li> <li>• Excitement</li> <li>• Excited [2x]</li> <li>• Understanding</li> </ul> | <p>Feelings that are experienced by teachers and learners are happy, encouraged, comfortable, laughter, life, confident, fun, look, sharing, language barriers, excitement, understanding, challenges, insecurity and no prior knowledge, helpful and enjoyment.</p> <p>It is important that learners are challenged for learning to take place even though the learner might feel insecure due to no prior numeracy knowledge</p> <p>Therefore, to have a learner who is confidently engaging with numeracy activities, the role of the teacher is to be understanding, helpful, exciting to address the learners' language and numeracy barriers are vital.</p> |

|  |   |  |
|--|---|--|
|  | <ul style="list-style-type: none"> <li>• Challenged</li> <li>• Insecure and no prior knowledge = challenged</li> <li>• Helpful</li> </ul> | <p>The teacher needs to assure that her presentation of numeracy activities are inviting, exciting,</p> <p>Her role is to guide, support and to encourage.</p> |
|--|---|--|

## APPENDIX I

### TRANSCRIPTION OF AN UNSTRUCTURED OPEN-ENDED FOCUS GROUP INTERVIEW 3 [COASTAL GROUP B] : INTERVIEW FRAMEWORK

| Theme                 | Segments: Brainstorming teachers' beliefs, experiences , knowledge and feelings  | Descriptive Paragraph   |
|-----------------------|--|---|
| Daily Programme       | <ul style="list-style-type: none"> <li>• Days of the week [3x]</li> <li>• Morning ring [2x]</li> <li>• Calendar</li> <li>• Months of the year</li> <li>• Seasons of the year [3x]</li> <li>• Movement</li> <li>• Weather</li> <li>• During snack-time [2x]</li> <li>• Register[2x]</li> <li>• Creative Activities [2x]</li> <li>• Music ring [2x]</li> <li>• We always use counting songs</li> <li>• Birthday</li> <li>• Sandpit</li> <li>• Maths</li> <li>• Story time</li> </ul> | <p>The Daily Programme is to guide teachers and learners in presenting activities which are integrated. The Daily Programme is a framework which gives learners security as well as let them practical experiences time movement – they know what to expect during each activity of the daily programme. The Daily Programme assists teachers in their preparation and planning for each of the sections of the daily programme and the accompanying assessment. The Daily Programme is creating a balance between teacher en learner directed activities</p> |
| Learners' Involvement | <ul style="list-style-type: none"> <li>• Working as a team/group</li> </ul>  | <p>Learner Involvement means that learners are actively involved and communicating</p>  |

|           |   |   |
|-----------|---|---|
|           | <ul style="list-style-type: none"> <li>• Difficult to count backwards</li> <li>• I think it is good for learners</li> <li>• Some learners are not confident – they need help and support - but others are</li> <li>• Active Involvement</li> <li>• Communication</li> <li>• Take turns [3x]</li> <li>• Enjoyment</li> <li>• Sharing [2x]</li> <li>• Learners are helping each other in terms of counting and drawing the number of objects needed</li> <li>• Ideas</li> <li>• Collection</li> </ul> | <p>ideas, feelings and experiences. Learners' involvement can show you Learners with Barriers to Learning e.g. Numeracy – use resources but count orally but cannot demonstrating counting “2s” with counters. Learner involvement is also about sharing resources and ideas in a group situation as well as peer-learning where a learner can assist another learner in grasping a numeracy concept, such as counting backwards.. Thus learner involvement entails that a learner is able to work in a group but also to work sometimes independently as an individual. When learners are working in a group, the teacher is able to identify whether a learner is confident or is experiencing learning barriers in a group situation, but also when he is working alone. The crux of learner involvement means that all learning activities need to be learner-centred, and learner paced.</p> |
| Resources | <ul style="list-style-type: none"> <li>• Manipulatives</li> <li>• Use fingers</li> <li>• Scale</li> <li>• Play dough</li> <li>• Using objects to count</li> <li>• Sequencing [2x]</li> <li>• Bright colours</li> <li>• Bottle tops</li> <li>• In swings</li> <li>• Stones</li> </ul>  | <p>Resources can be used to make numeracy experiences for learners more interesting. Three-dimensional resources can be used concretely in order for learners to experience and explore numeracy concepts. However, resources to grasp numeracy concepts also include the learners' own bodies, before resources such as two-dimensional puzzles and worksheets are introduced. Touching and feeling concretely is very important for numeracy development.</p>   |

|                       |   |   |
|-----------------------|---|---|
|                       | <ul style="list-style-type: none"> <li>• Using cubes</li> <li>• Puzzles</li> <li>• I usually use learners as resources</li> <li>• In tyres</li> <li>• Straws</li> </ul> <p>I use counting objects like bottle tops, counters etc.</p>   |   |
| Learning Outcomes     | <ul style="list-style-type: none"> <li>• Learners can count 1-10 orally</li> <li>• Weight</li> <li>• Days of the months</li> <li>• Measuring [3x]</li> <li>• Measurement [2x]</li> </ul> <p>Because most of the time I use counting</p> <ul style="list-style-type: none"> <li>• Always you count</li> <li>• Volume [3x]</li> <li>• Days of the week</li> <li>• Shapes [3x]</li> <li>• Counting [5x]</li> <li>• Counting is good</li> <li>• Colours [3x]</li> </ul> | The Learning Outcomes indicate what learners must achieve by demonstrating their understanding and skills based on the topic as well as the assessment standards that learners will be assessed on. The Learning Outcomes are developing the learners numeratically in order for them to be able to count, to measure etcetera. The Learning outcomes and assessment standards guide the teachers what learners must be able to achieve and therefore, guiding teachers to plan for such learning activities. |
| Teachers' experiences | <ul style="list-style-type: none"> <li>• I need more training about numeracy</li> </ul> <p>I wish more workshops to be conducted in numeracy</p> <ul style="list-style-type: none"> <li>• I need more training about numeracy</li> <li>• Because I will start learning numeracy</li> </ul>  | When teachers were exposed for the first time to numeracy workshops, some teachers felt shy. However, they gained a lot of knowledge and skills which made them happy and to be self-confident in implement numeracy in their classrooms. There are still numeracy gaps being experienced by teachers and therefore they  |

|  |   |  |
|--|---|--|
|  | <ul style="list-style-type: none"> <li>• I feel that I am doing a great job</li> <li>• I enjoyed it because we implement through play – games</li> <li>• I feel very nice and learn more about numeracy</li> <li>• Happy because at least I gained some knowledge in as far as numeracy is concerned</li> <li>• I feel good because I have learnt how to implement numeracy at a grade R level</li> <li>• I'm feeling okay when I got a training</li> <li>• First time I was shy and after I will feel free.</li> </ul> | <p>need to be exposed to more hands-on numeracy workshops.</p> |
|--|---|--|

## APPENDIX J

|   |
|---|
| <b>TRANSCRIPTION OF SEMI-STRUCTURED INDIVIDUAL INTERVIEW:<br/>PARTICIPANT 1</b> |
|---|

I – Interviewer; P1 = Participant 1

| Line | Interviewer/<br>Participant | Transcription   |
|------|-----------------------------|---|
| 1    | I                           | Participant 1, thank you, for having this interview with me. I am going to        |
| 2    | I                           | guarantee your privacy and confidentiality. May I ask, first of all, do you agree |
| 3    | I                           | that I made a sound tape?   |
| 4    | P1                          | Yes.  |
| 5    | I                           | Thank you very much. Now just some background information about you. Just         |
| 6    | I                           | tell me how long have you been a teacher.   |
| 7    | P1                          | 29 years. It's my 29 <sup>th</sup> year.  |
| 8    | I                           | 29 years. All those 29 years, you have been involved with Grade R's?              |
| 9    | P1                          | No. I started off with Grade 3.   |
| 10   | I                           | Grade 3?  |
| 11   | P1                          | I did Grade 3 for three years. And then, Grade 1 .                                |
| 12   | I                           | Grade 1?  |
| 13   | P1                          | For uhm.  |
| 14   | I                           | lots of years?  |
| 15   | P1                          | Ja, for lots of years. And this is my 9 <sup>th</sup> year with Grade R.          |
| 16   | I                           | Nineth year at Grade R?   |
| 17   | P1                          | Yes.  |

|    |     |  |
|----|-----|--|
| 18 | I   | So, what you are saying to me, you were trained as a found, a junior primary |
| 19 |     | teacher originally? A Grade 1, a Grade 2, and a Grade 3 teacher.             |
| 20 | P1  | No, I was trained as a primary teacher.                                      |
| 21 | I   | As a primary teacher?  |
| 22 | P1  | Yes.   |
| 23 | I   | Ok, for standards 1,2,3,4 and 5?   |
| 24 | P1  | 4 and 5 yes.   |
| 25 | I   | Ok, but then, when you started teaching, we taught at Grade 3?               |
| 26 | P1  | I started at the lower primary school.                                       |
| 27 | I   | Lower primary? Here at [name of school]?                                     |
| 28 | P1  | Yes, here at school.   |
| 29 | I   | And then they moved you down, from Grade 3 to Grade 1 to Grade R?            |
| 30 | P1  | Ja.  |
| 31 | I   | The Grade R training, how, have you ever been trained on that specifically?  |
| 32 | P1  | On Grade R, I have attended some ECD workshops,                              |
| 33 | I   | ECD workshops from the department?   |
| 34 | P1  | From the department, yes   |
| 35 | I   | Ok.  |
| 36 | P1  | But, I was never officially trained for Grade R.                             |
| 37 | I   | Ok, I just want to come back to you, you are a community-based Grade R       |
| 38 |     | teacher?   |
| 39 | P1  | No, I am not. I am school-based.   |
| 40 | P1I | You are school-based?  |
| 41 | P1I | Ja,. When this Grade R ...   |

|    |    |  |
|----|----|--|
| 42 | I  | Came in?   |
| 43 | P1 | Started, it started, my then principal was mr [unclear]. He thought we must              |
| 44 |    | start with a Grade R class.  |
| 45 | I  | Ok,  |
| 46 | P1 | Because we didn't have a preschool.  |
| 47 | I  | Ok, in the centre. Ok, fine, that's more or less I need to know, just to get some        |
| 48 |    | background from your school And you get, how many learners do you have in                |
| 49 |    | your class?  |
| 50 | P1 | This year I only got, I started off with 18, but I only got 13 left now.                 |
| 51 | I  | 13 left now.   |
| 52 | P1 | Ja.  |
| 53 | I  | Ok, but that's a nice small group to work with. Ok, Mam, I'm going now to tell           |
| 54 |    | you what has happened since we last had the big focus interview at K. At that            |
|    |    | interview, we identified certain topics, and the topics we identified was <i>learner</i> |
| 56 |    | <i>involvement, it was barriers, it was classroom atmosphere, teacher's attitude</i>     |
| 57 |    | <i>planning, concepts and classroom activities.</i> Do you remember, we start            |
| 58 |    | having first flash cards and we grouped the flash cards, into groups, and we             |
| 59 |    | gave the groups a title, a topic. What we did then, we started and we wrote for          |
| 60 |    | each topic a descriptive paragraph, a little definition saying what it was. What         |
| 61 |    | we're going to do now is, I want you to add to me or give to me your own                 |
| 62 |    | feelings about learner involvement. Can I just tell you what we said on that             |
| 63 |    | day?   |
| 64 | P1 | Yes.   |
| 65 |    | <i>learners, involvement, learners must think for themselves, learner participation,</i> |

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| 66 |    | <i>need to prepare them, numeracy involves the learner more than the educator,</i>         |
| 67 |    | <i>problem solving, thinking, we are surrounded with numeracy". And then our</i>           |
| 68 |    | <i>descriptive paragraph was: " Teachers must be enthusiastic, otherwise learners</i>      |
| 69 |    | <i>will pick it up and also be negative. Continuous assessment leads to learner</i>        |
| 70 |    | <i>progression. The educator should recognize learners' prior knowledge. The</i>           |
| 71 |    | <i>teacher as facilitator will ensure their positive involvement. They learn best</i>      |
| 72 |    | <i>when they use their senses. Encourage learners to think for themselves.</i>             |
| 73 |    | <i>Learners learn better when they participate in small group activities. Let learners</i> |
| 74 |    | <i>explore on their own, problem solving". Based on this learner involvement and</i>       |
| 75 |    | <i>as you have just said to me, you've been involved with Grade R learners for</i>         |
| 76 |    | <i>approximately 9 years, what do you think of your experience of learner</i>              |
| 77 |    | <i>involvement?</i>  |
| 78 | P1 | <i>When I started this class, this Grade R class, it wasn't more about learner</i>         |
| 79 |    | <i>involvement. I was involved and the learners were, it was</i>                           |
| 80 | I  | <i>more teacher-centred?</i>   |
| 81 | P1 | <i>Teacher-centred yes. But as years went passed, it turned now to be learner-</i>         |
| 82 |    | <i>Centred.</i>  |
| 83 | I  | <i>And the teacher?</i>  |
| 84 | P1 | <i>And the teacher is just there to guide the learners.</i>                                |
| 85 | I  | <i>To guide the learners? And she gets from them the information?</i>                      |
| 86 | P1 | <i>The information.</i>  |
| 87 | I  | <i>Ok, ok. I must say that I've seen that today with you. At one stage, at the</i>         |
| 88 |    | <i>outdoor play area, I saw you taking the lead from them. They wanted to play</i>         |
| 89 |    | <i>with the ball and you gave them the ball and you started playing with them. Yes,</i>    |

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| 90  |    | yes, yes. Learner involvement, uhm, is actually very important because it                |
| 91  |    | informs all the other, according to the focus group. It influenced all the other         |
| 92  |    | topics, things that come eventually to classroom activities. So, if we say learner       |
| 93  |    | involvement, you feel all learners must be involved nê?                                  |
| 94  | P1 | Yes.   |
| 95  | I  | Ok, I just, coming back to what I've seen today in your class. I've also seen all        |
| 96  |    | learner involvement where you sit with them and assisted them with building              |
| 97  |    | puzzles and where you assisted them with counting activities and making the 3,           |
| 98  |    | and especially, which came out very strongly, with the learner involvement in the        |
| 100 |    | music ring. They love that.  |
| 100 | P1 | Love that.   |
| 101 | I  | They love that.  |
| 102 | P1 | They love singing.   |
| 103 | I  | They loved singing, playing the instruments and the dancing. So there was fully          |
| 104 |    | learner involvement. Because, what I have also noticed there, was that you               |
| 105 |    | started with a song and then they bring in their own songs.                              |
| 106 | P1 | Yes.   |
| 107 | I  | And you let it.  |
| 108 | P1 | Let it go.   |
| 109 | I  | Let it go. Very nice. I also thought that was very nice. But let's go on to the          |
| 110 |    | next one. The next important one which came out was barriers. And coming to              |
| 111 |    | barriers, we said that there can be " <i>language barriers, limits, more paper work,</i> |
| 112 |    | <i>prevent blockage to learning, progress, re-inforcing, repetition, should not be</i>   |
| 113 |    | <i>leaving out stages e.g. abstract too soon, workbooks, formal, be careful</i> ". And   |

|     |    |  |
|-----|----|--|
| 114 |    | then our descriptive paragraph was: “ <i>To alert educators to possible problems.</i>        |
| 115 |    | <i>To plan lesson around barriers e.g. child with language barriers learn quicker</i>        |
| 116 |    | <i>with visual aids. Repetition installs better learning, especially for learners with a</i> |
| 117 |    | <i>second language. There is a lot of paperwork which can become a barrier,</i>              |
| 118 |    | <i>instead of teaching the teacher and learner are too involved with paperwork. It</i>       |
| 119 |    | <i>must be practical. It is important to understand concrete concepts before</i>             |
| 120 |    | <i>moving on to abstract concepts.”</i> Barriers, your experience, your feelings about       |
| 121 |    | it? About your class here today?   |
| 123 | P1 | I have here some learners with barriers, those who couldn't count and like                   |
| 124 |    | others, leaving out some numbers.  |
| 125 | I  | Yes.   |
| 126 | P1 | I, I think I have to concentrate more on them. I didn't concentrate.                         |
| 127 | I  | As normally you ...?   |
| 128 | P1 | As I would have normally done today.   |
| 129 | I  | Why not?   |
| 130 | P1 | Eh,  |
| 131 | I1 | Nervous?   |
| 132 | P1 | I think I , we did repeat some numbers, and I let them took their own time, when             |
| 133 |    | they were trying to mould the figure 3.  |
| 134 | I  | Very much so. That's when we introduced the NCS, we said it is learner-centred               |
| 135 |    | and learner-paced. And you were definitely, learner-paced. So you feel                       |
| 136 |    | barriers, if you've got a learner with a barrier, you must adapt to their pace.              |
| 138 | P1 | Their pace. There is one little boy who I was talking to last week when we had               |
| 139 |    | that workshop, and I raised my concerns about him. He does not finish, when we               |

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| 140 |    | use a crayon, he won't finish. Everybody else would have finished, but he        |
| 141 |    | would, and he is so slow, he just does this ...                                  |
| 142 | I  | Scribbling?  |
| 143 | P1 | No, he does it right, but he is very slow.                                       |
| 144 | I  | Very slow.   |
| 145 | P1 | And somebody suggested that, there might be something wrong with his             |
| 146 |    | thinking,  |
| 147 | I  | Ok,  |
| 148 | P1 | Or the problems is back home, starting from the home. And we didn't know that    |
| 149 |    | this problem was from home, because he comes late too school, he is always       |
| 150 |    | late and yesterday, he was almost an hour late.                                  |
| 151 | I  | Almost an hour late and why?   |
| 152 | P1 | It was the mother that I was talking too this morning, that short woman. And I   |
| 153 |    | asked her, I told her that they are late to school. His got a brother that's in  |
| 154 |    | Grade 2. They are always late too school, but the mother says they leave early   |
| 155 |    | from home for school. So they must be ...  |
| 156 | I  | Playing around?  |
| 157 | P1 | Playing around coming to school.   |
| 158 | I  | So they're not focussed?   |
| 159 | P1 | He is not focussed.  |
| 160 | I  | His attention goes quite often?  |
| 161 | P1 | Mmm.   |
| 162 | I  | Ok, but as you said, you gave him extra time today and ...                       |
| 163 | P1 | Yes, I did give him extra time but I was told that I must give him just a little |

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| 164 |    | portion to do.  |
| 165 | I  | So you must break it up?  |
| 166 | P1 | Eh. I must give him a portion for him, I must say that he must finish this part today and |
| 167 |    | see that he does that.  |
| 168 | I  | Ok. So it again comes back to be learner-paced nè? And breaking the work up               |
| 169 |    | into smaller pieces, that is achievable and telling a child he must complete it?          |
| 170 | P1 | But when I gave him, when they were doing the paint, but he finished that today.          |
| 172 | P1 | Ok. Maybe he enjoyed the painting? Maybe, and he was maybe more focussed                  |
| 173 |    | today.  |
| 174 | P1 | Maybe it was you, I don't know.   |
| 175 | I  | But coming back to the barriers, don't you find that the worksheets, that learners        |
| 176 |    | who've got problems, find the workbooks a bit difficult? The worksheets?                  |
| 177 | P1 | No, [teacher got up and fetched worksheets].  |
| 178 | I  | Ok.   |
| 179 | P1 | This one, [shows worksheet with numbers 1,2,3 to be traced on dots], he                   |
| 180 |    | didn't listen to me, 'cause when I asked him to do it again she did it with a blue        |
| 181 |    | Pen.  |
| 182 | I  | Correctly this time?  |
| 183 | P1 | Correctly.  |
| 184 | I  | Ja.   |
| 185 | P1 | Here, she had already done those two, so she didn't listen.                               |
| 186 | I  | Ok.   |
| 187 | P1 | And this one, I really don't know what's happening here. [A lot of red scribbling,        |
| 188 |    | although the first line where 1's must be made, looks alright],                           |

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| 189 | I  | Ok, and the other one?  |
| 190 | P1 | This one was the one I was talking about.   |
| 191 | I  | The one that's always late?   |
| 192 | P1 | This is the one that's always late.   |
| 193 | I  | Look how nicely he worked today. [All the numbers are traced correctly] Ok, I     |
| 194 |    | just want to come back to this one we've said, and that one was also alright.     |
| 195 |    | Just looking today at your class, it looks as if two children had problems        |
| 196 |    | completing. One] when you repeat it and gave and guided him, he corrected his     |
| 197 |    | stuff?  |
| 198 | P1 | Yes,  |
| 199 | I  | But the other one still had a problem. Just scribbling.                           |
| 200 | P1 | He was just scribbling.   |
| 201 | I  | Even when you told her to do it again? So sometimes paperwork can be a bit        |
| 202 |    | difficult to a learner with a barrier?  |
| 203 | P1 | Ja,   |
| 204 | I  | Is her work normally like this?   |
| 205 | P1 | No.   |
| 206 | I  | But today it was? U..... nè? Let's just have a look there, no I don't see         |
| 207 |    | anything there, let me just see at the back, but normally her worksheets, do they |
| 208 |    | normally look like this?  |
| 209 | P1 | No.   |
| 210 | I  | Not. Oh, here's her portfolio. Let me just have a look, Ok, there you did shapes, |
| 211 |    | you pasted it. And this is a collage, that's fine.                                |
| 212 | P1 | This is, her hands follow the dots.   |

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| 213 | I  | Follow the dots. And she goes over the lines quiet a lot nê?                          |
| 214 | P1 | Mmm.  |
| 215 | I  | So she is really experiencing, oh, here as well, experiencing problems. Her           |
| 216 |    | cutting is alright, this one is alright, I just want to come to he drawing, over here |
| 217 |    | problems and over here, she just scribbles. So it looks as if she does not            |
| 218 |    | Concentrate?  |
| 219 | P1 | She does not concentrate.   |
| 220 | I  | Ja, so we can say some learners do experience problems with barriers to               |
| 221 |    | learning. So, we agree that workbooks can sometimes be, although you do a lot         |
| 222 |    | of practical work as well? Because that 3, you formed it with the dough before        |
| 223 |    | you make the learners make the 3 on the worksheet. Anything else you'd like to        |
| 224 |    | add to barriers? Your feelings about barriers? Do you feel that you've got            |
| 225 |    | enough understanding about barriers as a teacher?                                     |
| 226 | P1 | Yes.  |
| 227 | I  | Did you have any training on barriers? Or did you just pick it up through the         |
| 228 |    | years?  |
| 229 | P1 | I, we've had a talk about barriers and learners with, LSEN learners.                  |
| 230 | I  | Ok, learners with special educational needs?  |
| 231 | P1 | Yes, we had, we've talked in one of our ...   |
| 232 | I  | Workshops?  |
| 233 | P1 | Workshops we had.   |
| 234 | I  | Ok, so you had a bit of exposure to that as well. Do you feel that you need some      |
| 235 |    | more training on barriers? Would you like to go to more?                              |
| 236 | P1 | To more, on ...   |

|     |    |   |
|-----|----|---|
| 237 | I  | More workshops on barriers?   |
| 238 | P1 | Yes, I do.  |
| 239 | I  | So you've got a weak, I won't say a weakness, but you would like to know more?              |
| 240 | P1 | I would like to know more about it.   |
| 241 | I  | More about it. And how to practical address some of these things? For                       |
| 242 |    | instance, what you have just shown me nè?   |
| 243 | P1 | Yes.  |
| 244 | I  | How to help that learner come back to the problem. Ok, let 's go on to the next             |
| 245 |    | one and the next one was our classroom atmosphere. And what we basically                    |
| 246 |    | said, we said: " <i>Classroom atmosphere is a chance to build relations, children</i>       |
| 247 |    | <i>enjoy it, they get confused, correct atmosphere is relaxed and important, is</i>         |
| 248 |    | <i>eager, encouraging, enjoyment, enlightning'</i> . Two people said it must be             |
| 249 |    | <i>excited. Important to develop as person and future citizen, it's fun, noisy, open</i>    |
| 250 |    | <i>to learning, positive atmosphere, positive interaction, positive self esteem,</i>        |
| 251 |    | <i>positive, participation, understanding, use creative thinking"</i> . What we have said   |
| 252 |    | of the descriptive paragraph, we've said that " <i>set the stage for positive learning.</i> |
| 253 |    | <i>A positive atmosphere encourages learning. Then learners will feel free to</i>           |
| 254 |    | <i>experience with numeracy. A word of encouragement leads to better learning. A</i>        |
| 255 |    | <i>lot of experimentation and patience: do not shout when a child does not</i>              |
| 256 |    | <i>understand. If a teacher is feeling negative towards numeracy activities,</i>            |
| 257 |    | <i>learners will pick it up and will not enjoy numeracy activities."</i> What do you feel   |
| 258 |    | about classroom atmosphere?   |
| 259 | P1 | What I know is that in my class, I'll always have ...                                       |
| 260 | I  | A positive?   |

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| 261 | P1 | A friendly atmosphere.   |
| 262 | I  | A friendly atmosphere?   |
| 263 | P1 | And free.  |
| 264 | I  | Yes.   |
| 265 | P1 | They are not restricted in any way. Sometimes they choose what to do,              |
| 266 | I  | Yes?   |
| 267 | P1 | Eh.  |
| 268 | I  | Sometimes?   |
| 269 | P1 | Sometimes, yes,  |
| 270 | I  | Okay.  |
| 271 | P1 | Not always.  |
| 272 | I  | Not always. Why not?   |
| 273 | P1 | I have to follow my daily preparation.   |
| 274 | I  | Okay.  |
| 275 | P1 | And in fact I must say, I want to say, my principal and my HOD, don't really       |
| 276 |    | understand what's been done in Grade R. Ja, so, when they come in the class,       |
| 277 |    | they want to see that, when they look at my daily preparation, they would like to  |
| 278 |    | know what's gonna, why are you doing numeracy instead of ...                       |
| 279 | I  | Okay, okay, instead of playing with the blocks or ...?                             |
| 280 | P1 | Uhm.   |
| 281 | I  | Okay, okay, but you say that your learners are free?                               |
| 282 | P1 | They are free.   |
| 283 | I  | They are free. I must say that I have noticed that as well, I wanted to agree with |
| 284 |    | this. When we played outside, at the freeplay area outside, you let them,          |

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| 285 |    | although you did invite them to some activities like the ball game, the cat and  |
| 286 |    | mouse game I think it was, and the handjie klap, you also let them at one stage  |
| 287 |    | play freely. And you had, just after the snacks, when they played here, you let  |
| 288 |    | them freely, and I even noticed when you had the music instruments, not all of   |
| 289 |    | them had shakers, and they went to the abacus, and they started to use that and  |
| 290 |    | you let it, you let it.  |
| 291 | P1 | As long as it is going to be relevant to the ...                                 |
| 292 | I  | Situation. Ja, definitely. So you feel that the classroom atmosphere is very     |
| 293 |    | important for learning.  |
| 294 | P1 | Okay.  |
| 295 | I  | Do you feel that the classroom atmosphere also helps with creative thinking and  |
| 296 |    | problem solving?   |
| 297 | P1 | It does.   |
| 298 | I  | Why do you say that?   |
| 299 | P1 | I have noticed that, with one of my learners that, the problem doing in a group, |
| 300 |    | they help ...  |
| 301 | I  | One another?   |
| 302 | P1 | They help one another.   |
| 303 | I  | Peer learning?   |
| 304 | P1 | Ay, they help one another.   |
| 305 | I  | Yes.   |
| 306 | P1 | Sometimes, they solve their own problems.  |
| 307 | I  | Just by looking, learning from one another?                                      |
| 308 | P1 | Mmm.   |

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| 309 | I  | No, that's fine. Okay, let's go on to the next one. The next one we had was                    |
| 310 |    | teacher's attitude, which in a big way, goes very closely with classroom.                      |
| 311 | P1 | Classroom.   |
| 312 | I  | Atmosphere nè? Because I do think, we'll come back ...   |
| 313 | P1 | You won't have an atmosphere, if the teacher's attitude is not positive.                       |
| 314 | I  | So you're actually saying to me already, teacher's attitude can influence the                  |
| 315 |    | classroom atmosphere nè?   |
| 316 | P1 | Yes.   |
| 317 | I  | Okay, let's just look what we've said there at the flashcards: " <i>I asked a lot of</i>       |
| 318 |    | <i>questions as I was afraid of how I am going to deliver to a child. I believe it will</i>    |
| 319 |    | <i>lead the young ones to greener pasture. I feel that it was really important to</i>          |
| 320 |    | <i>teach learners to count using days of the week, I feel that the learners are</i>            |
| 321 |    | <i>learning best by doing it practical, some learn it through rhymes. I felt miserable</i>     |
| 322 |    | <i>at my first workshop. I involve myself in activities with other grade R educators</i>       |
| 323 |    | <i>to gain insight. I never figure out how I am going to implement it then. I then</i>         |
| 324 |    | <i>solve some problems with mathematical skills, learned new ideas, see wider</i>              |
| 325 |    | <i>picture, think my learners have a numeracy background, workshops were always</i>            |
| 326 |    | <i>interested and fun."</i> And then our descriptive paragraph said:" <i>Positive attitude</i> |
| 327 |    | <i>towards numeracy encourages learners to be actively involved in activities.</i>             |
| 328 |    | <i>Workshops learn new ideas for the development of the children. The teacher</i>              |
| 329 |    | <i>must make activities fun for the learners to do. The teacher must be positive to</i>        |
| 330 |    | <i>change. I never figure, I felt miserable. Get a lot of clarity at the workshops,</i>        |
| 331 |    | <i>things we didn't understand. Prior knowledge and knowing the child's</i>                    |
| 332 |    | <i>background and his potential. Interaction with other Grade R educators brings a</i>         |

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| 333 |    | <i>lot of change because it enlightens the teachers.</i> ". So the teacher's attitude, |
| 334 |    | you feel play a very important role?   |
| 335 | P1 | Yes.   |
| 336 | I  | Let's look at attitude towards numeracy as such. How do you, personally, feel          |
| 337 |    | about numeracy? Let me give you some background, before you answer me.                 |
| 338 |    | You said to me, you were trained as a primary school teacher. Then you were,           |
| 339 |    | when you started teaching, directly thrown into the deep end, in the standard          |
| 340 |    | ones or the grade 3's, where you had to teach them mathematics, sums. When             |
| 341 |    | you went down to grade 1, you also taught them formal arithmetic, doing sums,          |
| 342 |    | plus, minus, counting, the shapes etcetera.  |
| 343 | P1 | Ja.  |
| 344 | I  | Coming to grade R, the first time you started with the Grade R class, did you do       |
| 345 |    | formally mathematics or numeracy with them?  |
| 346 | P1 | I did formal mathematics.  |
| 347 | I  | With the grade R learners?   |
| 348 | P1 | Mmm. Then RNCS was introduced, in fact OBE was introduced, and then we                 |
| 349 |    | changed.   |
| 350 | I  | To RNCS?   |
| 351 | P1 | Yes.   |
| 352 | I  | Yes.   |
| 353 | P1 | So numeracy, can I say, when I see now, I think it is just the same as                 |
| 354 |    | mathematics that I used to, that is just the name changed, because the counting        |
| 355 |    | is still the same, like, sometimes I like to start my day with them counting           |
| 356 |    | physically, physical counting and I still do it now. So that I can pick up those       |

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| 357 |    | learners who are not following  |
| 358 | I  | So are you saying, it is still more or less the same, you are still doing the basics, |
| 359 |    | like counting?  |
| 360 | P1 | Ay, still do the counting. It is learner-centred because the counting they do         |
| 361 |    | themselves, and using the same concrete objects.                                      |
| 362 | I  | That they used in Grade 1?  |
| 363 | P1 | Ee.   |
| 364 | I  | Okay, do you feel it is a little bit less formal and integrated in Grade R here?      |
| 365 | P1 | Ja, it's less, it's a little bit eh, eh ...   |
| 366 | I  | More informal, more practical?  |
| 367 | P1 | No, I'd say, it's more practical.   |
| 368 | I  | It's more practical.  |
| 369 | P1 | Ja.   |
| 370 | I  | Ja, more concrete?  |
| 371 | P1 | Ja, more practical, because we do abstracts like division, division we do it using    |
| 372 |    | our, our, how do I put it? We do it mental by, like when you ask the children, if I   |
| 373 |    | want to give you, if I had two boys, and four apples, how much? So that is            |
| 374 |    | division.   |
| 375 | I  | Okay, okay.   |
| 376 | P1 | So we do it mentally, more than ...   |
| 377 | I  | Practical?  |
| 378 | P1 | Practical.  |
| 379 | I  | Okay, is that for Grade R? Mentally?  |
| 380 | P1 | Mmm.  |

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| 381 | I  | Okay, can I just ask you something? How?  |
| 382 | P1 | We do it practically but ...  |
| 383 | I  | Sometimes mentally as well?   |
| 384 | P1 | Mentally as well.   |
| 385 | I  | How do you feel about mathematics or numeracy. Are you? How is your, were         |
| 386 |    | you scared of it when they brought out this new National Curriculum Statement?    |
| 387 | P1 | No, I wasn't, because it's just a name change.                                    |
| 388 | I  | It's just a name change?  |
| 389 | P1 | It's just a name change.  |
| 390 | I  | All the, but we will come back to that under concepts as well, bur uhm, all those |
| 391 |    | assessment standards, that they've got in those documents, are you frightened     |
| 392 |    | of them, are you okay with them, are you feeling you can ...?                     |
| 393 | P1 | No.   |
| 394 | I  | Do you feel you can do all that assessment standards?                             |
| 395 | P1 | No, I cannot, I am not. I'm not threatened by the assessment standards because    |
| 396 |    | when you teach, you expect to get something out of it, after what you have done.  |
| 397 |    | So, I think assessment standards is your achievement after ...                    |
| 398 | I  | Okay, okay. And just, what I also will need to know, here about the attitude      |
| 399 |    | towards numeracy, do you feel you want to have more exposure to numeracy          |
| 400 |    | training? Are you comfortable with what you've got? Do you feel that you have     |
| 401 |    | had enough training?  |
| 402 | P1 | Yes, I am comfortable with.   |
| 403 | I  | Okay, you feel that ...?  |
| 404 | P1 | At least I have mathematic, eh.   |

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|-----|----|---|
| 405 | I  | Resources, equipment? Yes, you do have lots of mathematical educational toys            |
| 406 |    | over there.   |
| 407 | P1 | I've got eh, number cards and picture, although some of them are not complete           |
| 408 |    | now, because the one piece just gets lost earlier. But I always make some               |
| 409 |    | more, when I have time.   |
| 410 | I  | Uhm, I just need to know something as well, have you been involved with                 |
| 411 |    | RUMEP's training?   |
| 412 | P1 | No.   |
| 413 | I  | Not? So you haven't been to their mathematics, is your school involved with             |
| 414 |    | RUMEP's mathematics training?   |
| 415 | P1 | Yes.  |
| 416 | I  | They are? Okay, but they don't involve you as a grade R teacher?                        |
| 417 | P1 | I have been to workshops but eh ...   |
| 418 | I  | You feel comfortable with what you've got?  |
| 419 | P1 | I feel comfortable with what I've got.  |
| 420 | I  | Okay, that's more than enough. Now coming, teacher's attitude definitely                |
| 421 |    | influences learning, planning. And under planning we said:" <i>We must also</i>         |
| 422 |    | <i>make our own resources, good preparation , how to present activities to learners</i> |
| 423 |    | <i>– you need to plan for it, incidental reading, doing numeracy, learned about</i>     |
| 424 |    | <i>resources and how to use it, must plan activities, time of day when numeracy</i>     |
| 425 |    | <i>activities are presented, is important". The definition is: "The preparation to</i>  |
| 426 |    | <i>present the lesson. Good planning ensures optimal learning. I plan what I want</i>   |
| 427 |    | <i>My learners to achieve. Good planning involves relevant resources. The time of</i>   |
| 428 |    | <i>day is important as mental work should take place earlier than later in the day.</i> |

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| 429 |    | <i>One needs to plan for this</i> ". How are your feelings, your experiences about |
| 430 |    | planning?  |
| 431 | P1 | I've been battling with the RNCS planning, but now, eh, since the workshop that    |
| 432 |    | we've been to, last week, and eh, we followed it up and meeting as a cluster at    |
| 433 |    | Lusukho Pre-School, and we talked some more on planning.                           |
| 434 | I  | How to do the physical planning?   |
| 435 | P1 | How to do the physical planning, yes.  |
| 436 | I  | Why did you battle?  |
| 437 | P1 | I would say the paperwork.   |
| 438 | I  | Is it too much?  |
| 439 | P1 | It's too much  |
| 440 | I  | Do you got it all in your head? You know what you want to do?                      |
| 441 | P1 | You know what you want to do. But you've got to put it on paper,                   |
| 442 | I  | Ja, and that's lot of time.  |
| 443 | P1 | And it needs a lot of time to do.  |
| 444 | I  | Okay, and they have shown you now how to do the planning?                          |
| 445 | P1 | Otherwise, otherwise planning my activities is no problem.                         |
| 446 | I  | I must say that I've noticed, especially coming to the outdoor play time, you had  |
| 447 |    | it already set up. You planned, you put the ropes outside, two rows with the       |
| 448 |    | hoops in the middle of it. It showed me, you planned what you were going to do     |
| 449 |    | there. And as well, even when coming in your class today, even the numeracy        |
| 450 |    | activities, counting, they knew where to take stuff and immediately started doing  |
| 451 |    | that with them. Can I just ask you, ehm, the time of day when you do numeracy      |
| 452 |    | activities, you do it early in the day?  |

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| 453 | P1 | Early in the morning.   |
| 454 | I  | Early in the morning? Although you've got a school readiness one, period just               |
| 455 |    | near about twelve o'clock. Actually more about quarter past twelve around when              |
| 456 |    | you did the puzzles with the numeracy today.  |
| 457 | P1 | Mmm.  |
| 458 | I  | So you, but they were more actively involved, mentally, when you do it early in             |
| 459 |    | the morning?  |
| 460 | P1 | Ja.   |
| 461 | I  | Okay, because then they are not so tired?   |
| 462 | P1 | But, the part I did with the puzzle, was an indoor activity. Ja. That's what I do           |
| 463 |    | during indoor activities. It is either construction, or puzzles or games or                 |
| 464 |    | whatever.   |
| 465 | I  | Okay, when you do your planning, do you see numeracy as when we did it in                   |
| 466 |    | Foundation Phase, as a period on it's own, or do you ?                                      |
| 467 | P1 | No.   |
| 468 | I  | You see it ?  |
| 469 | P1 | It integrates with other subjects. Whatever you do, there is going to be                    |
| 470 |    | numeracy.   |
| 471 | I  | So it happens spontaneously?  |
| 472 | P1 | Mmm.  |
| 473 | I  | Okay, goed. Once you have done the planning, because planning means also, if                |
| 474 |    | you look at the definition, it is:" <i>Good planning ensures optimal learning.</i> "And one |
| 475 |    | of the things we need to learn, according to what the focus group said was                  |
| 476 |    | concepts. And under concepts there were different things that we wanted to                  |

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| 477 |    | have. We said we must focus on: " <i>Colours, concepts, concrete, concrete</i>         |
| 478 |    | <i>experiences, comparisons, cups different sizes, days of the week, few, figures,</i> |
| 479 |    | <i>less, many, measurement, more/less, numbers, number concept, quantity,</i>          |
| 480 |    | <i>seriation, shapes and sizes."</i> A lot of shapes and sizes. Thinking of today      |
| 481 |    | especially, what was the concept you wanted to teach them? What was your               |
| 482 |    | activity?  |
| 483 | P1 | I was on numbers.  |
| 484 | I  | You were on numbers and especially, number 3.  |
| 485 | P1 | Ja, number 3.  |
| 486 | I  | And how to make it? And saying how much is 3?  |
| 487 | P1 | How much is 3.   |
| 489 | I  | Okay, okay. I want to come back to the concepts, because the concepts are              |
| 490 |    | very ...   |
| 491 | I  | Important, if you look at the assessment standards. Are you, how can I put it?         |
| 492 |    | Uhm, tell me, do you feel, by the end of the year, you will have covered all the       |
| 493 |    | concepts according to the numeracy standards? Are there too many? Are there            |
| 494 |    | too few for you?   |
| 495 | P1 | No. They are just enough.  |
| 496 | I  | They are just enough?  |
| 497 | P1 | Eeh. Not less, not many.   |
| 498 | I  | You can handle, it's just enough for a year to do. Tell me, what do you feel           |
| 499 |    | about concepts?  |
| 500 | P1 | When you mean concepts, are we talking about colours?                                  |
| 501 | I  | Ja.  |

|     |    |  |
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| 502 | P1 | Comparisons? Measurement?  |
| 503 | I  | Any of the numeracy concepts.  |
| 504 | P1 | No they are just okay, because concepts are always in their daily lifes. Like,     |
| 505 |    | position and space, front, back, side, yabone?                                     |
| 506 | I  | Ja.  |
| 507 | P1 | Under, on top of, propositions, so it is always in their daily lifes.              |
| 508 | I  | And they learnt best if they have mastered a concept nè? Because concepts are      |
| 509 |    | the building stones, from there you can go ...                                     |
| 510 | P1 | Bigger, biggest.   |
| 511 | I  | Ja.  |
| 512 | P1 | When we were doing movement ring, the physical movement ring, we did eh, we        |
| 513 |    | all did a rhyme "Nina nina diyakule". It means I've been small but now I am big. I |
| 514 |    | have been fat and now I am thin. So, that's maths, though they don't know          |
| 515 |    | about it.  |
| 516 | I  | But you have included it into music?   |
| 517 | P1 | It's included into the music now.  |
| 518 | I  | So it happens spontaneously for ...?   |
| 519 | P1 | Spontaneously again.   |
| 520 | I  | In all activities?   |
| 521 | P1 | Ja, concepts are always there.   |
| 522 | I  | So we cannot take concepts away, concepts are part of learning. If you take        |
| 523 |    | concepts away, you can't, you feel there is no learning?                           |
| 524 | P1 | Yes.   |
| 525 | I  | Okay, okay, goed. From concepts, we said the last one is classroom activities.     |

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| 526 |    | We also said concepts influence the classroom activities nè? And there we said            |
| 527 |    | the classroom activities we can do are:" <i>back to front numbers, colours, different</i> |
| 528 |    | <i>by putting together the matching objects and count them, counting, counting</i>        |
| 529 |    | <i>games, counting objects, doing it practical, counting songs, dramatising rhymes,</i>   |
| 530 |    | <i>games, geostats, how many months in the year? The learners must use their</i>          |
| 531 |    | <i>fingers to name one by one. Puzzles. Rhymes. Solve problems by themselves,</i>         |
| 532 |    | <i>sorting, threading beads. Using learners themselves by counting how many in</i>        |
| 533 |    | <i>their small groups. Using months in a year by naming them."</i> The paragraph          |
| 534 |    | says:" <i>Do not do activity as activity, but it should stimulate learners' interest.</i> |
| 535 |    | <i>Activities should go with the theme/topic you are dealing with. All work and no</i>    |
| 536 |    | <i>play make John a dull boy. Teachers should ensure that activities cover all</i>        |
| 537 |    | <i>areas of development, for example, physical, social, mental. Learners should be</i>    |
| 538 |    | <i>involved in all activities as individuals, pairs or in groups. Learners must be</i>    |
| 539 |    | <i>motivated and stimulated by the classroom activities. Through activities the</i>       |
| 540 |    | <i>teacher will be able to identify special needs. Concepts should be concrete and</i>    |
| 541 |    | <i>based on Learning Outcomes and Assessment Standards".</i> When we do                   |
| 542 |    | classroom activities, you said you had a problem with planning, but you had it in         |
| 543 |    | your head set, so, how, if you got it in your head, and you want to do a                  |
| 544 |    | classroom activity, uhm, no, let me rephrase it. Tell me, how do you go about to          |
| 545 |    | plan for your classroom activities? Even if it is not on paper.                           |
| 546 | P1 | If I'm, like now, let's say I am doing colours, my concept is colours. The                |
| 547 |    | activities that I to place, should be ...   |
| 549 | I  | In line?  |
| 550 | P1 | In line with colours. Whatever I do, must be based on colours.                            |

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| 551 | I  | Okay, okay.  |
| 552 | P1 | So whatever activity I choose, it must be relevant to colours.                     |
| 553 | I  | Okay, uhm, classroom activities, I just want to come back here, uhm, is involving  |
| 554 |    | the learner again, don't you think so? Do you, sometimes, let them initiate an     |
| 555 |    | activity?  |
| 556 | P1 | Yes, I do. Like I said for, I said I let them choose what they want to do.         |
| 557 | I  | Okay, okay, uhm, it was interesting for me, when you had the puzzles, there        |
| 558 |    | today, you were busy with the one group to build a puzzle and the other group      |
| 559 |    | was doing the domino, sorting the dominoes. Some of them started building little   |
| 560 |    | cards, but you let them do it. That's coming back to what you have said, you are   |
| 561 |    | learner-centred. That although you planned for them to sort ...                    |
| 562 | P1 | To sort and they did something else, I let ...                                     |
| 563 | I  | You let them do that, because you have realized that they also need to be          |
| 564 |    | involved with.   |
| 565 | I  | Okay, I want to come back to this planning of the concepts, because I am a little  |
| 566 |    | bit worried, personally, about the planning of the concepts. When you plan this    |
| 567 |    | concepts, what is the basis, what do you use as a guidelines to plan those         |
| 568 |    | concepts? When do you know what concept, let's say for instance, let's make        |
| 569 |    | an example in numeracy, when do you, must you start teaching or plan to teach      |
| 570 |    | time, for the learners to know about time?   |
| 571 | P1 | As soon as possible. As soon as ...  |
| 572 | I  | They come into you, you already start with today and morning and afternoon and ... |
| 573 | P1 | Ja, with, as early as possible, I think. Because, they've been staying at home     |
| 574 |    | with their parents and okay, let me say they did have prior knowledge, this is the |

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| 575 |    | morning, this is the afternoon and night. Now, they are coming to school and        |
| 576 |    | they know they must come early to school, so ...                                    |
| 577 | I  | It is already in there?   |
| 578 | P1 | It is already in there but when I have to re-enforce it, so it can suit the school. |
| 579 | I  | Okay, I want to come to this concepts, again and the planning of this concepts,     |
| 580 |    | is there something guiding you to say which concepts must be planned when?          |
| 581 |    | And what are those concepts?  |
| 582 | P1 | No, we don't have anything to guide us except that you, you choose for yourself     |
| 583 | I  | You choose? Where do you choose from?   |
| 584 | P1 | From the workbooks that they give you.  |
| 585 | I  | From the workbooks?   |
| 586 | P1 | Or from the books that was given as a guide.  |
| 587 | I  | As a guide, okay, as a teacher's guide?   |
| 588 | P1 | As a teacher's guide.   |
| 589 | I  | I've seen, you've got over there quiet a few of them as well. You've got the nice   |
| 590 |    | purple one of ...   |
| 591 | P1 | I got it only last week.  |
| 592 | I  | You only got it last week? It is a very new book? But you also got some of the,     |
| 593 |    | you also got the National Statements down there. The National Statements            |
| 594 |    | specify the concepts to teach. Okay, but I agree with you, they don't tell you      |
| 595 |    | when it must be taught?   |
| 596 | P1 | Eh.   |
| 597 | I  | Do you think that is a weakness in the system? For instance, when must you          |
| 598 |    | teach, May month, formation of 3 or the number concept of 3 or can you do that      |

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| 599 |    | already in February month? Why did you decide to do the number concept of 3        |
| 600 |    | in May month? And not in February month for example?                               |
| 601 | P1 | In February I was, February, March, April, I was doing the numbers orally.         |
| 602 | I  | Okay.  |
| 603 | P1 | In February I was doing them orally. I started with number 1, in mid February.     |
| 604 |    | Now I had a problem with the number 2, because they, I still have a problem of     |
| 605 |    | them, and, what do I say, making it look the other way round.                      |
| 606 | I  | They turn it around, yes?  |
| 607 | P1 | Ehwe, turning it around.   |
| 608 | I  | Okay, ja.  |
| 609 | P1 | So, that's why I am ...  |
| 610 | I  | Spend a lot of time then on re-enforcing the correct way of 2 and making sure      |
| 611 |    | they understand the concept of 2? So what you are actually saying to me, is        |
| 612 |    | when you plan some of your concepts, you take into account learner-pace.           |
| 613 | P1 | Learner-pace. Ehwe.  |
| 614 | I  | And your learner's barriers as well. So, they were not ready yet to go on?         |
| 615 | P1 | To the next one?   |
| 616 | I  | And that you got from your own observation of the learners ...                     |
| 617 | P1 | Observation of the learners.   |
| 618 | I  | And based on your own knowledge and your experience you've had.                    |
| 619 | P1 | So, for the department or whoever, it won't be okay, if they say, you must do this |
| 620 |    | concept for ...  |
| 621 | I  | That month?  |
| 622 | P1 | For February, and then two weeks in February, one week in February, so             |

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| 623 | I  | Okay, they must, you feel they must take into account the learner's pace for the     |
| 624 |    | whole thing.   |
| 625 | P1 | Eh, learner-pace.  |
| 626 | I  | Okay, that explains it to me. So it comes back, to summarize, that we say            |
| 627 |    | planning influences concepts, because you had to plan when you were going to         |
| 628 |    | do the 3, based on the experience you had with 1 and 2. Okay, can I just ask         |
| 629 |    | one question, Just to clarify for me further this thing of influencing your          |
| 630 |    | concepts, will you be covered all the numbers up to 10 by the end of the year? If    |
| 631 |    | you, it's now May month and you are busy with number 3. Do you think you             |
| 632 |    | would have ...?  |
| 633 | P1 | Yes, I would have.   |
| 634 | I  | Do they pick up, much faster as you go along?  |
| 635 | P1 | If they, in the first term or the first and second term, they ask you. During the    |
| 636 |    | term they are used to now.   |
| 637 | I  | It becomes more familiar? Okay, you will be able to cover all, up to 10 concept?     |
| 638 | P1 | Yes.   |
| 639 | I  | Okay, goed. But again, it is about planning your concepts. You didn't come in        |
| 640 |    | today, ag I'm doing number 3 today, tomorrow I am going to do number 4 or            |
| 641 |    | what else. You just ...  |
| 642 | P1 | I want to add something else. That's, I may have now learners in the class with      |
| 643 |    | barriers, sometimes, it goes like that, you'll find that you've got learners who are |
| 644 |    | struggling during the first part of the year, but when you get to the third term,    |
| 645 |    | they are, they have matured and they ...   |
| 646 | I  | They have developed?   |

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| 647 | P1 | They developed quickly and by the end of the year, you are surprised.               |
| 648 | I  | We call it the late blossoms.   |
| 649 | P1 | Okay.   |
| 650 | I  | They were slow to start, but once they start running, they run.                     |
| 651 | P1 | They run.   |
| 652 | I  | They run. No, that's very, very true. Okay, let's look at planning and classroom    |
| 653 |    | Activities.   |
| 654 | P1 | There are no classroom activities without planning.                                 |
| 655 | I  | Okay. Thank you Mam. Thank you so much for all your input, the clarification that   |
| 657 |    | you have given me. I am going now to take all what you've said here, and put it and |
| 658 |    | type it.  |

## APPENDIX K

**TRANSCRIPT OF SEMI-STRUCTURED INDIVIDUAL INTERVIEW:  
PARTICIPANT 2**

I – Interviewer; P2 - Participant 2

| Line | Inter-viewer/<br>Particip<br>ant | Transcription   |
|------|----------------------------------|---|
| 1    | I                                | Participant 2 thank you for agreeing to do this interview with me. Before we              |
| 2    |                                  | start with this interview, may I have your permission to tape this interview?             |
| 3    | P2                               | Yes you can.  |
| 4    | I                                | Thank you so much. Before we start, just give me some background about                    |
| 5    |                                  | you. How long have you been teaching a Grade R class?                                     |
| 6    | P2                               | I started teaching at K which is a Special School. I was teaching there six to nine year. |
| 7    |                                  | nine years but they were just performing like a 3 to 4 year. So this is my ninth          |
| 8    | I                                | Ninth year. And how long have you been here with the Grade R's?                           |
| 9    | P2                               | This is my fourth year.   |
| 10   | I                                | OK. Have you been trained as a preprimary teacher or were you first trained               |
| 11   |                                  | as a special school teacher?  |
| 12   | P2                               | I was, first I was trained as a pre-primary teacher. At CSD, Centre for Social the        |
| 13   |                                  | Development. Then after I did my diploma at Rhodes, for three years. Then I               |
| 14   |                                  | also did training for special needs when I was at K. I did this for one year. At          |
| 15   |                                  | University in Cape Town [Says something not clear on tape]                                |
| 16   | I                                | Ok, Participant 2, what we are going to do today, we are going to focus on the            |
| 17   | I                                | titles that came out, the themes from our group discussion. When we had our               |

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|----|----|--|
| 18 |    | group discussion, we identified, we wrote some flash cards based on our              |
| 19 |    | statements which we had and it was about what you think or what you feel or          |
| 20 |    | call to mind when I use the word numeracy and then tell me about your                |
| 21 |    | experiences in implementing numeracy in your classroom as well as, tell me           |
| 22 |    | about your experiences of attending numeracy in-service training sessions by         |
| 23 |    | the district office. From there you went and wrote flash cards individually, we      |
| 24 |    | put it up on the wall, we went through those flash cards to get a common             |
| 25 |    | understanding, and then you, and then the group went and we grouped it               |
| 26 |    | together. Once we have done the grouping we gave it a topic and we also              |
| 27 |    | gave it a descriptive paragraph or definition. And from there, we went and           |
| 28 |    | place arrows to say whether there is a relationship or no relationship and how       |
| 29 |    | the one influences the other. We are going to do exactly the same today but          |
| 30 |    | we are a bit more focus because we are using the results of the focus group.         |
| 31 |    | And from there we are working on. The first one we had was about learner             |
| 32 |    | involvement. Can you tell me what do you feel about learner involvement?             |
| 33 |    | What is your perception about it? Or what is your experience about it? How           |
| 34 |    | do you feel about learner involvement?   |
| 35 | P2 | Uhm, the learners learn a lot because they learn to play. They don't know that       |
| 36 |    | they are learning but they are learning. They like to be involved in all activities. |
| 37 | I  | So you feel, if I can summarize, it is very important that learners are involved in  |
| 38 |    | all learning.  |
| 39 | P2 | In all the activities of learning.   |
| 40 | I  | This learner involvement, are they involved with the activities, do they initiate    |
| 41 |    | the activities that you do with them or is it mostly you that design the activities  |

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|-----|----|---|
| 42  |    | they are going to be involved with.   |
| 43  | P2 | Yes, I, most of the time I plan the activities because they don't know from A to    |
| 44  |    | B. So I have to plan for it, so I can see their weaknesses and strengths.           |
| 45  | I  | If we say learner involvement, what do you do, how do you handle a situation        |
| 46  |    | where you find that a learner is not really involved; he is just looking instead of |
| 47  |    | let's give an example, today you had an activity under your school readiness,       |
| 48  |    | where they had to thread.   |
| 49  | P2 | Yes.  |
| 50\ | I  | And one learner was just playing with the shoelace. How do you handle that,         |
| 51  |    | how are you going to get that child involved?                                       |
| 52  | P2 | Yes, it is difficult to force him. But I just thought maybe he was not interested   |
| 53  |    | today. because if I was going to force him he was not going to be happy. But        |
| 54  |    | tomorrow I am going to do the same and then I will see, try that he . Because I     |
| 55  |    | will end up forcing him, because at the end I would like to assess him to see if    |
| 56  |    | he knows the colours.   |
| 57  | I  | So you feel that learner involvement, if learner involvement is important one       |
| 58  |    | needs to respect their right to choose sometimes not to be involved.                |
| 59  | P2 | Yes.  |
| 60  | I  | And that you rather would be learner-paced?   |
| 61  | P2 | Yes.  |
| 62  | I  | And assessed the situation about it?  |
| 63  | P2 | Yes.  |
| 64  | I  | Let's see what the group has said about it. And then you can say to me if you       |
| 65  |    | agree or disagree with them. The first flash cards we had under learner             |

|    |    |  |
|----|----|--|
| 66 |    | involvement was <i>They love rote learning. It is important for learners learner</i>   |
| 67 |    | <i>involvement, learners must think for themselves, learner participation, need to</i> |
| 68 |    | <i>prepare them, numeracy involves the learner more than educator, problem-</i>        |
| 69 |    | <i>solving, thinking, we are surrounded with numeracy. Would you like to add</i>       |
| 70 |    | here, something or are you happy with these ones?                                      |
| 71 | P2 | They are all okay.   |
| 72 | I  | Okay. I just need your view on, if we say, we need to prepare learners for learner     |
| 73 |    | involvement, how would you go about that?  |
| 74 | P2 | We need to prepare the learner for their involvement?                                  |
| 75 | I  | Is that what you need, you tried to do with the creative activities earlier today,     |
| 76 |    | when you demonstrated to them how they must, by saying to them what they               |
| 77 |    | are going to do at each table?   |
| 78 | P2 | Yes, it's difficult. How should I put it, but I can see your point.                    |
| 79 | I  | That they don't just rush to the table, and start. There you ...                       |
| 80 | P2 | What I am doing, by the end of the week, I want to be sure that each and every         |
| 81 |    | learner did participate in that activity. Today I will take 8 learners to do that      |
| 82 |    | activity on numeracy and tomorrow another group, then by the end of the week           |
| 93 |    | I will have 38 pages. Then it is there where I am going to assess. So I am             |
| 84 |    | involving them in a correct way.   |
| 85 | I  | Ok. But you also prepared them, what I saw physically, is that you explained           |
| 86 |    | to them what is going to happen to them at every table. You showed them                |
| 87 |    | shapes and they have to trace with one finger, so that it doesn't go off. But          |
| 88 |    | there you also prepared them for their participation. How would you involve            |
| 89 |    | learners with problem solving and thinking?  |

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| 90  | P2 | For numeracy?   |
| 91  | I  | Ja, especially for numeracy but for any situation. In your class, do you feel           |
| 92  |    | there was a situation today that had the opportunity for problem-solving or             |
| 93  |    | didn't you pick it up? Or do you feel they were alright with the problem-solving        |
| 94  |    | activities, their thinking activities?  |
| 95  | P2 | I cannot think now, but maybe tonight, it may come to me. But I didn't                  |
| 96  |    | experience it today. Maybe tomorrow I will think, there was a problem here.             |
| 97  | I  | Let's read the paragraph we wrote. We said <i>teachers must be enthusiastic,</i>        |
| 98  |    | <i>otherwise learners will pick it up and also be negative. Continuous</i>              |
| 99  |    | <i>assessment leads to learner progression. The educator should recognize</i>           |
| 101 |    | <i>learners' prior knowledge. The teacher as facilitator will ensure their positive</i> |
| 102 |    | <i>involvement. They learn best when they use their senses. Encourage</i>               |
| 103 |    | <i>learners to think for themselves. Learners learn better when they participate in</i> |
| 104 |    | <i>small group activities. Let learners explore on their own – problem solving.</i>     |
| 105 |    | Now you had a lot of small group activities, especially creative activities today.      |
| 106 |    | With your numeracy activities as well as your school readiness activities with          |
| 107 |    | them.. Would you like to add here or do you feel you are covered with this              |
| 108 |    | paragraph? Do you differ here?  |
| 109 | P2 | No. Learners learn best when they use their senses.                                     |
| 110 | I  | Yes. I learnt something from you today, which I have never seen before; it was          |
| 111 |    | when you did counting with the fingers. 1 and 5 makes it 6. That was with the           |
| 112 |    | fingers. That was for me quite interesting 'cause it was the first time I saw it        |
| 113 |    | being done like that way. And I thought that was a very nice idea.                      |
| 114 | P2 | I think it has made them to be ready to know that, so that when you say let's do        |

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| 115 |    | it physical by using bottles tops or sticks, if they know by using their fingers then |
| 116 |    | they use the bottle tops, that's where they gonna know exactly what you are           |
| 117 |    | going to say: one and four this side, how many? 5. So I feel ...[unclear] I feel      |
| 118 |    | it is the only way to involve. They thought I was playing and they did it for fun.    |
| 119 |    | But I feel it is making them, 'cause even if they don't understand, it is there in    |
| 120 |    | their heads.  |
| 121 | I  | Rote learning has got a role to play as well because when you ... interesting for     |
| 122 |    | me was when you took them outside, they immediately start to count, they love         |
| 123 |    | counting .  |
| 124 |    | Let's go on to the next one, barriers. And tell me, first of all, what do, you said   |
| 125 |    | you had some experience working with learners with special educational                |
| 126 |    | needs. What do you feel about barriers, how do you handle barriers, how do            |
| 127 |    | you cope with such situations, do you have learners in your class with barriers?      |
| 128 | P2 | There are hyperactive learners that always need you attention and supervision.        |
| 129 |    | What I do then is making sure that I'm keeping them busy. That is the only            |
| 130 |    | way to control them. If he is finished doing this, you should give him another        |
| 131 |    | thing to do. The only thing you make them to learn is to keep them busy all the       |
| 132 |    | time. And to give them love and support.  |
| 133 | I  | Love and support?   |
| 134 | P2 | And assess them. To think about the planning, what am I going to do with them?        |
| 135 |    |   |
| 136 | I  | What other barriers do you've got? You named hyperactive in the class.                |
| 137 | P2 | There is a slow learner. There is another learner that is a little bit nervous. I     |
| 138 |    | don't know what to do, I don't know how to cope with him. I never had a               |

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| 139 |    | nervous learner.  |
| 140 | I  | Is he scared, is he afraid?   |
| 141 | P2 | He looked like an abused, to me, but I can't go to his family and say what is the |
| 142 |    | problem. He is never, even if he is doing his work, he is never confidential. He  |
| 143 |    | is just doing it. If I am gonna ask him, why are you drawing this, he [teacher    |
| 144 |    | demonstrates as if she is being shocked movement].                                |
| 145 | I  | He skrik, what's skrik, it's as if he had a shock?                                |
| 146 | P2 | Shock and to be nervous, he does not answer you the right way [unclear            |
| 147 |    | muttering] I have this year only this nervous learner and the slow learner, they  |
| 148 |    | are about two. I make sure that when I do my planning I cater for them. And       |
| 149 |    | assess. And give them love and support. What I'm doing, if I gonna                |
| 150 |    | demonstrate what to do on that tables, I make sure after they all seated down, I  |
| 151 |    | go to them individually and then say to them Do you know that you have to do      |
| 152 |    | this and ...  |
| 153 | I  | You show them?  |
| 154 | P2 | And then I look at her eyes, if she says yes, and I can see the eyes, she is      |
| 155 |    | understanding, and then I go to another one. This is the only way I am            |
| 156 |    | teaching them. To go to them quietly and say nicely Do you know you must do       |
| 157 |    | this?   |
| 158 | I  | Ok, lots of personal attention.   |
| 159 | P2 | Yes.  |
| 160 | I  | Do you feel you are, you have just mentioned this nervous learner that you        |
| 161 |    | don't know what to do. With the slow learners and the hyperactive learners, do    |
| 162 |    | you feel you have enough experience and enough skills and enough training to      |

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| 163 |    | handle these kids or would you like to have more training on it?                  |
| 164 | P2 | I would like to have more training. But at the moment, I am coping with them.     |
| 165 |    | Maybe there are some changes about this slow learners, that's why I would         |
| 166 |    | like to get some more training. And because really, I don't know how to cope      |
| 167 |    | with the situation with the one that is not confidential. Because sometimes I     |
| 168 |    | feel coming to her to say something, but because she's gonna [teacher makes       |
| 169 |    | jerking movements] I decide I must leave her.                                     |
| 170 | I  | I want to come back to the barriers, if you got a problem or do you experience    |
| 171 |    | in your class problems with more, that's more like a, that needs a remedial       |
| 172 |    | intervention for instance when they make a eight, they make it sideways,          |
| 173 |    | instead of it being from top to bottom and from left to right or when they make a |
| 174 |    | 9 they make it.   |
| 175 | P2 | Like something like b's?  |
| 176 | I  | Ja, have you experienced that?  |
| 177 | P2 | Yes, there are three doing that.  |
| 178 | I  | How do you handle that? Have you been trained on how to handle such situations?   |
| 179 |    |   |
| 180 | P2 | There is no way to help them but, because at school we used to send them to       |
| 181 |    | another psychology, Fort England, that is the only [unclear] that is helping. But |
| 182 |    | at the moment I am trying. Because some of them, they are turning the paper,      |
| 183 |    | they like to do that. Because you can see, you gonna watch them, turning the      |
| 184 |    | paper. I'm giving them more time. If you did a [unclear] then I'm gonna say Ok,   |
| 185 |    | write the number next to it and can you please do it again. But the next day I    |
| 186 |    | will see them doing it back again, then I will try it.                            |

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| 187 | I  | So a lot of exercises. Just tell me, did you have a lot of training on how to        |
| 188 |    | remedy this kind of thing?   |
| 189 | P2 | Not a lot.   |
| 190 | I  | Would you say that this is a need for you, that you would like to address            |
| 191 |    | remedial problems with young learners?   |
| 192 | P2 | Yes.   |
| 193 | I  | Ok, may I ask something else, in your course, you said you were trained as a         |
| 194 |    | pre-primary teacher with CSD ?   |
| 195 | P2 | Centre for Social Development but after that I did my diploma.                       |
| 196 | I  | Diploma, where?  |
| 197 | P2 | At Rhodes.   |
| 198 | I  | Diploma at Rhodes in, is that the ACE one?   |
| 199 | P2 | Yes, the ACE one but I did the two years, I did a diploma, and an ACE one            |
| 200 |    | year, because of the money, I didn't finish my second year, but I am going to        |
| 201 |    | finish that next year.   |
| 202 | I  | Ok, the diploma, was it for pre-primary?   |
| 203 | P2 | It was for foundation phase.   |
| 204 | I  | For foundation phase. In their course, I don't know their curriculum, do they        |
| 205 |    | teach you there, I am just asking it, let me first say why I am asking it, I used to |
| 206 |    | be a pre-school teacher, and, but I did my diploma through UNISA and UNISA           |
| 207 |    | that years, the curriculum was not as formal as it is now. So I was never            |
| 208 |    | trained how to teach learners how to handle a pencil correctly, or a scissor or      |
| 209 |    | how to form the symbols or numbers, or even the alphabet. That I only learnt         |
| 210 |    | when I started with the Curriculum 2005 when pre-school became a little bit          |

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| 211 |    | more formal. So I identified that myself as a gap. Is that the same with you?       |
| 212 |    | That you people don't know exactly where to start writing?                          |
| 213 | P2 | It is the same Mam, but what they did to us, they teach you through                 |
| 214 |    | assignment, you will get, in fact they will ask you how did you deal with this and  |
| 215 |    | that? And they are going to say go and do research with other teachers and          |
| 216 |    | write this assignment. This is the only way they, then they'll see that you know    |
| 217 |    | or through your assignment that you're researching, like I can come to you and      |
| 218 |    | say how do you teach a child from left to right, I can come because I didn't        |
| 219 |    | know.   |
| 220 | I  | So you feel you are covered with this or do you feel you need more training?        |
| 221 | P2 | I do need more, 'cause I would like to learn 'till I die.                           |
| 222 | I  | No, but you don't want to learn things that you already know, you want to go now to |
| 223 |    | the [unclear]. But you feel that you do need more skills?                           |
| 224 | P2 | Yes.  |
| 225 | I  | Ok, let's just see what the barriers, what we wrote under barriers. We said that    |
| 226 |    | we had language barriers, there is limits to barriers. It is more paperwork,        |
| 227 |    | prevent blockage to learning, progress, re-inforcing, repetition, should not be     |
| 228 |    | leaving out stages e.g. abstract too soon, workbooks, formal, careful. Would        |
| 229 |    | you like to add here or do you feel this covered everyone?                          |
| 230 | P2 | Yeah, what's here about progress, is fine. Yes, it's fine about progress            |
| 231 |    | because they know exactly what they were saying. Because you assess their           |
| 232 |    | progress everyday, it's the only way you know whether they have learnt or not       |
| 233 | I  | by assessing them?  |
| 234 | P2 | Yes.  |

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| 235 | I  | So, you don't do activities for the sake of activities, there is a reason, while they do the |
| 236 |    | activities, you want to see how they are coping with it.                                     |
| 237 | P2 | Yes.   |
| 238 | I  | And you just said to me you re-inforced and you do a lot of repetition.                      |
| 239 | P2 | Yes.   |
| 240 | I  | Language barriers, do you also experience language barriers? Your learners                   |
| 241 |    | are mostly isiXhosa speakers? Home language?   |
| 242 | P2 | Yes, it is a big challenge. When they come they just speak Xhosa and even if                 |
| 243 |    | you are speaking English, because you are Black, they take that advantage not                |
| 244 |    | to answer you, they think why are you speaking English everyday, because                     |
| 245 |    | you are Black.   |
| 246 | I  | They know you can speak Xhosa?   |
| 247 | P2 | Yes.   |
| 248 | P2 | [unclear – name of boy] he can speak English. But sometimes he will come                     |
| 249 |    | and tell me something in Xhosa, and then I will tell him, English, you can speak             |
| 250 |    | English, so it's a challenge, a barrier, because even if Thabo do understand,                |
| 251 |    | but because this one is speaking Xhosa, even me I am going to Xhosa. But I                   |
| 252 |    | feel to just force them because they know the words.   |
| 253 | I  | Just tell me, what is their LOLT when they go to Grade 1? Is it isiXhosa or also             |
| 254 |    | English?   |
| 255 | P2 | It was good last year, there was a Xhosa lady, but now there is a White lady.                |
| 256 | I  | So it's English?   |
| 257 | P2 | Yes, and the lady, what I picked up, uses First Language. She is an English                  |
| 258 |    | speaker and you know when I say the lady is a First Language, she's quick.                   |

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| 259 |    | Because I am a second Language , I , so that the children can learn.                       |
| 260 | I  | So it is very important that your learners learn to speak English before they go           |
| 261 |    | to Grade 1 otherwise they won't be ready for Grade 1 and the concepts?                     |
| 262 | P2 | Yes.   |
| 263 | I  | Ok, let's go on to the descriptive paragraph: <i>To alert educators to possible</i>        |
| 264 |    | <i>problems is the definition. To plan lesson around barriers e.g. child with</i>          |
| 265 |    | <i>language barriers learn quicker with visual aids. Repetition instills better</i>        |
| 266 |    | <i>learning, especially for learners with a second language. There is a lot of</i>         |
| 267 |    | <i>paperwork which can become a barrier, instead of teaching, the teacher and</i>          |
| 268 |    | <i>learner are too involved with paperwork. Do you agree with that, lot of</i>             |
| 269 |    | <i>paperwork?</i>  |
| 270 | P2 | For sure.  |
| 271 | I  | <i>It must be practical. It is important to understand concrete concepts before moving</i> |
| 272 |    | <i>on to abstract concepts.</i>  |
| 273 | I  | Ok, let's go on to our next one, <i>classroom atmosphere</i> . How do you feel about       |
| 274 |    | <i>classroom atmosphere? What is your experiences? What is your perception?</i>            |
| 275 |    | <i>What do you believe about the classroom atmosphere?</i>                                 |
| 276 | P2 | I believe that the children must be free in the classroom, and they must do                |
| 277 |    | what they want to do. But as long as I am sure they are learning, even if they             |
| 278 |    | are there in the doll corner, I know they are learning some skills. Some are               |
| 279 |    | speaking English and they are teaching each other, some will learn colours, to             |
| 280 |    | count. Yes, yes, in a classroom there must not be such noise, there must just              |
| 281 |    | be normal noise.   |
| 282 | I  | It must not be chaotic?  |

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| 283 | P2 | This is what I feel, because some children are learning when it is a little bit        |
| 284 |    | quieter although some are learning when they are talking to each other.                |
| 285 |    | Another one is teaching, just give me an orange crayon, another one is going           |
| 286 |    | to learn this is orange, it is not red.  |
| 287 | I  | So there must be communication with them, with each other                              |
| 288 | P2 | Yes, there must be.  |
| 289 | I  | But is must not be so rowdy that it becomes chaotic.                                   |
| 290 | P2 | And I feel that I have to control them.  |
| 291 | I  | You have to control them as well.  |
| 292 | P2 | Yes, so that they know they are here to learn.   |
| 293 | I  | So the <i>atmosphere</i> you are trying to say to me, is that they must feel free what |
| 294 |    | they can do but do not get out of hand.  |
| 295 | P2 | Yes.   |
| 296 | I  | So you make sure that you've got to find a balance between free or let me say,         |
| 297 |    | frisk and control?   |
| 298 | P2 | Yes and I also feel about the classroom, they must learn to respect everything,        |
| 299 |    | even their papers. Even to respect others, and everyone that is getting in and         |
| 300 |    | up.  |
| 301 | I  | So you feel respect?   |
| 302 | P2 | For everything.  |
| 303 | I  | That's going into the classroom, also is helping the classroom to be conducive         |
| 304 |    | for learning?  |
| 305 | P2 | Yes, yes, because if they are throwing toys, that's when they are out of control and   |
| 306 |    |  |

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| 307 | I  | then you become angry?   |
| 308 | P2 | Yes.   |
| 309 | I  | You become angry and the class atmosphere becomes ?...                               |
| 310 | P2 | Yes, and even me, I must always be in the level of them, so that everyone can        |
| 311 |    | come and express themselves, tell me what is their need?                             |
| 312 | I  | Ok, just tell me, let's just get back to what you had today for your activities, you |
| 313 |    | told me you feel that learners must be free to do something, even if you             |
| 315 |    | planned something else.  |
| 315 | P2 | Umm.   |
| 316 | I  | I am thinking now of a situation where you played outside with them balls, but       |
| 317 |    | there was a group who wanted to skip and you let them skipped at that stage.         |
| 318 | P2 | Yes.   |
| 319 | I  | Ok, coming back to your activities, your creative activities, where would you        |
| 320 |    | say to me there, can you give me an example of today's activities, where you         |
| 321 |    | had them, giving them a chance to be free there? Because you had the cutting         |
| 322 |    | of the pencil and elephant here and at the other table counting balls and            |
| 323 |    | numbering it, and on the third table you had dough ...                               |
| 324 | P2 | Cutting.   |
| 325 | I  | They were cutting and pasting.   |
| 326 | P2 | And colouring.   |
| 327 | I  | Colouring in, where would you say was your, where could learners be free?            |
| 328 |    | When you asked them to play at the dough? There you didn't prescribe what            |
| 329 |    | they must do?  |
| 330 | P2 | Yes, when I sent them to the playdough table, I asked them, do you want to go        |

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| 331 |    | to the playdough table or do you want to get another paper to draw what ever           |
| 332 |    | you want. Then they said to me, they want to go to the playdough first. Then I         |
| 333 |    | said others go to the doll corner.   |
| 334 | I  | Or the doll corner? So, you gave them a choice?  |
| 335 | P2 | Yes, those who go to the doll corner, they feel free, because I asked can I            |
| 336 |    | give you another paper or do you want to go to the playdough?                          |
| 337 | I  | So you have given them an opportunity to choose?                                       |
| 338 | P2 | And even, those that were drawing balls, was a little bit [unclear] because I          |
| 339 |    | didn't focus on them. As I said to them, you can draw yourself or the balls,           |
| 340 |    | and then they decided to start with the balls and then turn the paper and draw         |
| 341 |    | themselves.  |
| 342 | I  | Ok, goed. We said in the group <i>classroom atmosphere: chance to build</i>            |
| 343 |    | <i>relations, children enjoy it, a positive classroom atmosphere, one can be</i>       |
| 344 |    | <i>confused if there is not a positive classroom atmosphere, correct atmosphere</i>    |
| 345 |    | <i>is relaxed, is important, the learners will be eager, encouraging, the</i>          |
| 346 |    | <i>atmosphere must be encouraging, there must be enjoyment, it must be</i>             |
| 347 |    | <i>enlightening, that's what you said, there must be learning that takes place, it</i> |
| 348 |    | <i>must be excited, most of them, especially, when you played with the balls,</i>      |
| 349 |    | were very excited.   |
| 350 | P2 | Yes.   |
| 351 | I  | <i>important to develop as person and future citizen, it's fun, it may be noisy,</i>   |
| 352 |    | <i>open to learning, positive, atmosphere positive, there must be positive</i>         |
| 353 |    | <i>interaction, positive self esteem, positive participation, understanding, use</i>   |
| 354 |    | <i>creative thinking. To come back there is, do you agree with all of this?</i>        |
| 354 | P2 | I agree with it.   |
| 356 | I  | Ok, the descriptive paragraph: <i>Classroom atmosphere set the stage for</i>           |
| 357 |    | <i>positive learning. A positive atmosphere encourages learning. Then learners</i>     |
| 358 |    | <i>will free to experience with numeracy. A word of encouragement leads to.</i>        |
| 359 |    | <i>better learning. We were saying: do not shout when a child does not</i>             |
| 360 |    | <i>understand. A lot of experimentation and patience is needed. If a teacher is</i>    |

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| 361 |    | <i>feeling negative towards numeracy activities, learners will pick it up and will</i>  |
| 362 |    | <i>not enjoy numeracy activities. Let's go on to our next one and that's the</i>        |
| 363 |    | <i>teacher's attitude. We have already touched on here a little bit ...</i>             |
| 364 | P2 | Yes.  |
| 365 | I  | Tell me what do you feel? What role does the teacher's attitude play                    |
| 366 |    | in numeracy?  |
| 367 | P2 | The teacher's attitude must always be positive. Not to force the servant but at the end |
| 368 |    | of the day, they must learn something.  |
| 369 | I  | She must know where she is going to, ne?  |
| 370 | P2 | Uhhh.   |
| 371 | I  | It is not playing for the sake of playing.  |
| 372 | P2 | Yes.  |
| 373 | I  | It's playing for the sake of learning.  |
| 374 | P2 | Yes, for sure. And you as a principal must teach teachers to be positive, even          |
| 375 |    | if your subject is making you angry. You'll have to control your anger, yes, eh,        |
| 376 |    | I don't know how to say this one, because some days, you feel this one ...?             |
| 377 | I  | Is too much today?  |
| 378 | P2 | is too much but you feel I have to.   |
| 379 | I  | You cannot, you must always respect the learners as well.                               |
| 380 | P2 | Yes   |
| 381 | I  | Even if you feel you are not up to it.  |
| 382 | P2 | Yes, like today. There was another one that was so naughty and every time I             |
| 383 |    | go there, he is talking, he is not doing his work. I just said go there, and do         |
| 384 |    | your work there. He did not know I was cross, he just went there, and came              |
| 385 |    | back and work on my nerves. So yes, the attitude of the teacher is very                 |
| 386 |    | important because there are children that may be scared of you, then they will          |
| 387 |    | not be able to learn. And they will not be able to express themselves.                  |
| 388 |    | Because sometimes, is you are talking too much and screaming, they get ...              |
| 389 | I  | Angs, ja.   |
| 390 | P2 | Yes.  |
| 391 | I  | They start to get, what's the word, angstig uhm, it's not only scared, but.             |

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| 392 |    | nervous.  |
| 393 | P2 | Yes, nervous and not to do well. Yes, there is another one that is hyperactive          |
| 394 |    | in my class, when I shout at another one, he's gonna run as well. That's why I          |
| 395 |    | feel I'm not supposed to, he's gonna run as well. Because he knows that I am,           |
| 396 |    | he also belongs to that group of [unclear] naughtiness. Yes, I feel that's the          |
| 397 |    | only way you let them to learn, to be positive in all activities.                       |
| 398 | I  | I want to come to your attitude towards numeracy. How do you feel about                 |
| 399 |    | numeracy? Are you comfortable with numeracy? Are you excited about                      |
| 400 |    | numeracy or is it overwhelming for you?   |
| 401 | P2 | Yes, it is exciting because I felt that from January to November, I must just put       |
| 402 |    | it little bit by little bit. In my morning, I actually tried to put it in literacy, and |
| 403 |    | even during creative activities, I try to and even in my story. So otherwise I          |
| 404 |    | just do it free. It's just normal to me. Some days I won't know that there was          |
| 405 |    | numeracy, but I can see that, when I am reflecting, I did put numeracy ...              |
| 406 | I  | It integrates within your daily programme quiet spontaneously?                          |
| 407 | P2 | Yes, because even when they are playing outdoor play, some games ...                    |
| 408 | I  | Will have numeracy?   |
| 409 | P2 | Yes.  |
| 410 | I  | Ok, do you feel, again coming back to your attitude towards numeracy, these             |
| 411 |    | activities that you do with them, uhm, you said you want to assess them. Ok, if         |
| 412 |    | you assess them, from where do you assess them? What is your guideline for              |
| 413 |    | assessment? What I am coming to, what I am trying to come to you is before              |
| 414 |    | 96, we didn't have a numeracy curriculum, it happened spontaneously with the            |
| 415 |    | learners, we did things like today like opposites, and small and big, those kind        |
| 416 |    | of things. But we never had to do formal numeracy concepts. That only came              |
| 417 |    | in with the Curriculum 2005, and then, now the latest RNCS, as it now stands,           |
| 418 |    | National Curriculum Statements where they broke it down into learning                   |
| 419 |    | outcomes and assessment standards.  |
| 420 | P2 | Yes.  |
| 421 | I  | If you think about those assessment standards, do you feel, what are your attitude      |
| 422 |    | towards it? Do you often look at those standards?                                       |

|     |    |  |
|-----|----|--|
| 423 | P2 | Yes, those standards are helping us to know exactly what you are going to            |
| 424 |    | teach Yes, because those assessment standards are the only thing that are            |
| 425 |    | to listen, you will have to tell the child a story, and she must answer the          |
| 426 |    | guiding you to what to do. Because they know, if you want to teach the child         |
| 427 |    | questions, and dramatize and summarize the story. So the assessment                  |
| 428 |    | Standards ...  |
| 429 | I  | Gives you a guideline how to do it.  |
| 430 | P2 | Yes, it just makes your teaching easier, although there is more paperwork. But, when |
| 431 |    | you are doing it, it just feels it is helping.                                       |
| 432 | I  | Ok, so you do not feel negative about numeracy or?                                   |
| 433 | P2 | No, I don't feel ...   |
| 434 | I  | Looking, coming back to the assessment standards, are there any assessment           |
| 435 |    | standards that you feel you need more to unpack and you need more                    |
| 436 |    | guidance or skills? I am thinking of things like data, uhm, what's it,               |
| 437 | P2 | Data into numeracy ?   |
| 438 | I  | It's Numeracy Learning Outcome 5, Data Collection.                                   |
| 439 | P2 | LO 5, Data Collection.   |
| 440 | I  | Do you feel you are comfortable handling all those sub-assessment standards          |
| 441 |    | or are there some that you need more ...?  |
| 442 | P2 | No, not yet, I am not comfortable about some of them. That's why I would like        |
| 443 |    | sometimes, if I did my lesson plans, somebody to come to assess it. Because          |
| 444 |    | sometimes you feel, maybe I forced this assessment standards and I am not            |
| 445 |    | sure if this assessment standards are really showing the activity.                   |
| 446 | I  | Sometimes you feel you need more guidance in unpacking and help to                   |
| 447 |    | implement it?  |
| 448 | P2 | Yes, there are some that are clear to say, maybe provide a variety of material       |
| 449 |    | for the children to do whatever. You can see it is clear this one, they paste        |
| 450 |    | and choose what to do, this one. But there are some that...                          |
| 451 | I  | That needs more ...?   |
| 452 | P2 | Yes, I wish someday, one day to get someone to tell me maybe the activity for        |
| 453 |    | this one, this is the activity. Yes.   |

|     |    |   |
|-----|----|---|
| 454 | I  | Or this is some of the activities you can use how to do it and show it                    |
| 455 |    | practically, demonstrate it?  |
| 456 | P2 | Yes.  |
| 457 | I  | Ok, let's look what we written in the group or do you want to add?                        |
| 458 | P2 | Yes, it's fine, but I just want to add, we as pre-primary teachers, sometimes,            |
| 459 |    | we are adding up maybe the whole month, using the same LO and                             |
| 460 |    | Assessment Standard, because of the resources sometimes. Then you will                    |
| 461 |    | feel, I never achieved the assessment standard, because I don't have                      |
| 462 |    | resources for it. Sometimes your are sure.  |
| 463 | I  | So it comes to your planning sometimes. Ok, That doesn't make you negative                |
| 464 |    | but you just realize that sometimes you are not able to realize some of the               |
| 465 |    | things.   |
| 466 | P2 | Yes.  |
| 467 | I  | Ok, let's look what we said here. Remember, this was written, with the                    |
| 468 |    | background that people's attitude was at first a bit negative or this one was,            |
| 469 |    | because she went for the first time to a workshop. This one wrote: <i>I asked a</i>       |
| 470 |    | <i>lot of questions as I was afraid of how I am going to deliver it to a child. I</i>     |
| 471 |    | <i>believe it will, the teacher's attitude, it will lead the young ones to greener</i>    |
| 472 |    | <i>pasture. I feel that it was really important to teach learners to count using days</i> |
| 473 |    | <i>of the week. Do you agree with that?</i>   |
| 474 | P2 | [nod head in agreement]   |
| 475 | I  | <i>I learnt best by doing it practical, some learn it through rhymes. I felt</i>          |
| 476 |    | <i>miserable at my first workshop – did you also feel miserable at your first</i>         |
| 477 |    | <i>workshop?</i>  |
| 478 | P2 | [nod head in agreement]   |
| 479 | I  | Overwhelmed?  |
| 480 | P2 | Not yet.  |
| 481 | I  | Not yet. Ok, since you have start coming to the departmental workshops, you               |
| 482 |    | are happy ?   |
| 483 | P2 | Mmm, because sometimes I felt, what they are teaching me, I already do in my              |
| 484 |    | class. Although I am not writing it down. This is what I felt.                            |

|     |    |   |
|-----|----|---|
| 485 | I  | <i>Ok, I involve myself in activities with other Grade r educators to gain insight.</i> |
| 486 |    | Are you part of a cluster meeting regularly?  |
| 487 | P2 | Yes, we are, no, we're just clustering with other people that are ...                   |
| 488 | I  | Also teaching activities. How often do you meet?  |
| 489 | P2 | Maybe once a month.   |
| 490 | I  | Then you discuss activities and numeracy problems.                                      |
| 491 | P2 | Yes.  |
| 492 | I  | <i>Goed, I never figure out how I am going to implement it then. Ok, that was</i>       |
| 493 |    | <i>when they introduced the new curriculum. I then solve some problems with</i>         |
| 494 |    | <i>mathematical skills. Do you also agree with that?</i>                                |
| 495 | P2 | Yes I do.   |
| 496 | I  | <i>You learned new ideas, see wider picture, think my learners have a numeracy</i>      |
| 497 |    | <i>background, workshops were always interested and fun.</i>                            |
| 498 | P2 | Mm [in agreement].  |
| 499 | I  | Ok, let's go to the descriptive paragraph: <i>Positive attitude towards Numeracy</i>    |
| 500 |    | <i>encourages learners to be actively involved in activities. Workshops learn new</i>   |
| 501 |    | <i>ideas for the development of the children. The teacher must make activities</i>      |
| 502 |    | <i>fun for the learners to do. The teacher must be positive to change (I never</i>      |
| 503 |    | <i>figure, I felt miserable). That teacher, she was a bit negative because she</i>      |
| 504 |    | <i>didn't understand what was going on. Get a lot of clarity at the workshops,</i>      |
| 505 |    | <i>things we didn't understand. Prior knowledge and knowing the child's</i>             |
| 506 |    | <i>background and his potential. Interaction with other Grade R educators brings</i>    |
| 507 |    | <i>a lot of change because it enlightens the teacher. So you agree with that?</i>       |
| 508 | P2 | nod head in agreement]  |
| 509 | I  | <i>Ok, now we come to number 5, and that is what we have started off, planning.</i>     |
| 510 |    | <i>You said that sometimes you are not able to achieve the learning outcomes</i>        |
| 511 |    | <i>because of your resources. Tell me how do you feel about planning? Do you</i>        |
| 512 |    | <i>find it challenging?</i>   |
| 513 | P2 | Ok, now we come to number 5, and that is what we have started off, planning.            |
| 514 |    | You said that sometimes you are not able to achieve the learning outcomes               |
| 515 |    | because of your resources. Tell me how do you feel about planning? Do you               |

|     |    |  |
|-----|----|--|
| 516 |    | find it challenging?   |
| 517 | P2 | Planning is a big challenge. Because when you do plan, you must know that  |
| 518 |    | you have the answer for the learners. And you must know what resources do  |
| 519 |    | you have to achieve it. And you go to your LO's and Assessment Standards,  |
| 520 |    | and you must really know what kind of assessment you are going to use for. |
| 521 | I  | Thank you Mam, for your participation and contributions.                   |

## APPENDIX L

**TRANSCRIPT OF SEMI-STRUCTURED INDIVIDUAL INTERVIEW:  
PARTICIPANT 3**

I – Interviewer; P3 - Participant 3

| Line | I/P | Transcription  |
|------|-----|--|
| 1    | I   | Mrs , ag. Mev O, baie dankie dat jy instem het tot hierdie onderhoud. Kan ek     |
| 2    |     | jou eers vra of ek jou toestemming het om alles op band op te neem wat ons       |
| 3    |     | sê   |
| 4    | P3  | Ja, sekerlik.  |
| 5    | I   | Seker. Goed. Kom ons begin met vandag se onderhoud. Vertel my 'n bietjie,        |
| 6    |     | hoe lank hou u al skool?   |
| 7    | P3  | Ek is in Gr R omtrent 29 jaar. Voor dit het ek kindertuin gehad. Uhm. Ek het in, |
| 8    |     | van 1967 af, hou ek al skool.  |
| 9    | I   | Van 67 af hou jy skool? Dit was eers kindertuin nè. Dit was nie junior primer    |
| 10   |     | nie?   |
| 11   | P3  | Dit was kindertuin.  |
| 12   | I   | Dit was kindertuin gewees en toe het die voorskoolse preprimere graad            |
| 13   |     | ingekom en nou is dit Graad R. Sê vir my waar het jy jou opleiding gekry?        |
| 14   | P3  | Graaf Reinet Opleidingskollege en toe nou die Graad R pre-primêr, deur           |
| 15   |     | UNISA.   |
| 16   | I   | Deur Unisa. Hoe lank is jy nou al hoof van hierdie skool?                        |
| 17   | P3  | Uhm, 15 jaar. 89 af.   |
| 18   | I   | Van 89 af. Goed. Sê vir my in die tyd wat jy nou al hoof is, het jy gereeld      |
| 19   |     | opleidingskursusse gedoen?   |
| 20   | P3  | Ja. Daar was op 'n gereelde basis opleidingskursusse.                            |
| 21   | I   | Hoeveel kinders het jy in die klas?  |
| 22   | P3  | 25   |
| 23   | I   | 25. En is dit moedertaal kinders?  |

|    |    |  |
|----|----|--|
| 24 | P3 | Nee, hulle word in hulle tweede taal onderrig. Hulle is Xhosa kinders en hulle     |
| 25 |    | word in Engels onderrig.   |
| 26 | I  | Xhosa kinders wat in Engels onderrig word. Goed. Is hulle van die dorp of is       |
| 27 |    | hulle van die township af?   |
| 28 | P3 | Hulle kom meestal van die township.  |
| 29 | I  | Goed, P3, wat ons nou gaan doen is, ons gaan 'n bespreking hê oor die              |
| 30 |    | topics of temas wat ons in die fokusgroep geïdentifiseer het. Laat ek jou net      |
| 31 |    | vinnig terugvat na die proses wat ons gedoen het. In die groot fokusgroep het      |
| 32 |    | ek vir julle 3 stellings gevra. En die stellings was, vertel vir my van jou        |
| 33 |    | ervaringe in verband met gesyferdheid in jou klaskamer, uhm, vertel my, hoe        |
| 34 |    | was jou opleiding wat daarmee gemoeid was en as gevolg, op grond daarvan           |
| 35 |    | het julle vir my op kaartjies woorde neergeskryf. Na ons die woorde                |
| 36 |    | neergeskryf het, het ons die kaartjies gevat en ons het dit gegroeppeer in         |
| 37 |    | groepe. En toe het ons vir elke groep 'n titel gegee. En toe het ons na die titel, |
| 38 |    | het ons ook 'n beskrywende paragraaf bygegee.                                      |
| 39 | I  | Goed. Kom ons begin met die eerste ene. Voordat ek vir jou gaan sê wat die         |
| 40 |    | groep gesê het wil ek graag eers jou belewenis hê. Daarom gaan ek jou eers         |
| 41 |    | vra. Vertel my van leerderbetrokkenheid. Wat is jou gevoel daarvoor? Wat is        |
| 42 |    | jou ervaring daarmee? Hoe hanteer jy dit in jou klas? Veral met betrekking         |
| 43 |    | met gesyferdheid?  |
| 44 | P3 | Dit is baie belangrik dat die leerder betrokke is. Ek meen hy moet nie net 'n      |
| 45 |    | aanhoorder wees nie. Hy moet prakties betrek wees. En soos wat ons geleer          |
| 46 |    | het, hy leer deur sy liggaam, deur sy gevoel en sy betrokkenheid is van die        |
| 47 |    | bekende na die onbekende, van die maklike na die moeilike, uhm, sodat 'n           |
| 48 |    | mens dit soos 'n trap vat, trap vir trap. Maar die leerder moet aktief betrokke    |
| 49 |    | wees.  |
| 50 | I  | Hoe kry jy 'n leerder aktief betrokke? 'n Outjie wil nie 'n legkaart bv bou nie.   |
| 51 | P3 | Die een ding wat jy nie moet doen nie, is om vir hom 'n vrees daarvoor te laat     |
| 52 |    | op te bou nie. Jy moet voorkom dat 'n negatiewe assosiasie opgebou is en as        |
| 53 |    | daar is moet jy probeer om dit aanvaarbaar te maak deurdat dit 'n pret             |
| 54 |    | ondervinding te maak en nie deur druk te plaas nie, sodat hy vry kan voel om       |

|    |    |  |
|----|----|--|
| 55 |    | te eksperimenteer. sodat hy blootgestel kan word al neem hy nie deel nie,              |
| 56 | I  | Maak jy gebruik van, ek het vandag gesien in jou klasopset, dat jy baie gebruik        |
| 57 |    | maak van groepwerk ook, maak jy ooit gebruik van, uhm, wat ons noem in                 |
| 58 |    | Engels peerteaching? Of peer learning?   |
| 59 | P3 | Nie baie nie. Dit het sy pluspunte uhm, veral in die begin as dit met die taal 'n      |
| 60 |    | probleem is en sê nou maar daar is van die ander wat hulle beter kan help in           |
| 61 |    | Engels, is daar as gevolg van die taalprobleem, kan so een betrek raak om              |
| 62 |    | net oor te verduidelik in Xhosa wat jy gesê het en uhm . En ja, tot op 'n punt         |
| 63 |    | sal ek daarvan gebruik maak, maar nie te veel nie.                                     |
| 64 | I  | Nie te veel nie, maar dit gebeur van tyd tot tyd.                                      |
| 65 | P3 | Ja   |
| 66 | I  | Goed. Kom ons sê net, kyk net wat die groep daarvoor gesê het. Hulle het               |
| 67 |    | <i>gesê feel they love rote learning, it is important for learners, learner</i>        |
| 68 |    | <i>involvement, learners must think for themselves, learner participation, need to</i> |
| 69 |    | <i>prepare them, numeracy involves the learner more than the educator, problem-</i>    |
| 70 |    | <i>solving, thinking, we are surrounded with numeracy.</i> Ek wil terugkom in jou      |
| 71 |    | klas het ek dit baie sterk opgelet dat hier is geweldige gesyferdheidrykheid, jy       |
| 72 |    | het geweldig baie visuele kaarte, wat ook vir die kinders help. Hoe hanteer jy,        |
| 73 |    | hoe laat jy 'n kind betrokke raak by probleemoplossing en denke? Is dit deel           |
| 74 |    | van jou daaglikse roetine? Of hoe gaan jy te werk?                                     |
| 76 | P3 | Ja, dit word in elke faset van die dagprogram ingewerk. As hulle musiek doen,          |
| 77 |    | dan kan hulle self, wel dis nie probleemoplossing nie, maar kan hulle kreatiewe        |
| 78 |    | denke of as 'n mens storietyd het kan 'n mens vrae vra of uhm, om hulle te lei         |
| 79 |    | om die probleem op te los. Uhm, as enige een van hulle met 'n problem kom,             |
| 80 |    | dan sal ek eers vir hulle sê maak 'n plan, 'n mens kan 'n plan maak, kyk of jy         |
| 81 |    | nie kan 'n plan maak nie. Dan die opvoedkundige speletjies wat hulle speel,            |
| 82 |    | party daarvan is daartoe, kan hulle help om problem op te los. Of ek sal               |
| 83 |    | partykeer doelbewus 'n probleem skets, en dan vir hulle sê hoe sal jy dit              |
| 84 |    | oorkom? Ek sal sê jy moet altyd 'n plan kan maak. Ek het nou die dag vir               |
| 85 |    | hulle gesê wat as jy in 'n winkel is en jy raak verwyderd van jou ma of jou pa?        |
| 86 |    | Kan jy 'n plan maak? Ek lei en lok hulle tot denke.                                    |

|     |    |  |
|-----|----|--|
| 87  | I  | Goed. Ek moet sê ek het dit veral met jou storie, veral toe jy gepraat het wat       |
| 88  |    | kon die hasie gedoen het om te help, het dit ook baie sterk deurgekom. So ek         |
| 89  |    | wil sê ek het gesien. Kom ons kyk na die ... Is daar iets wat jy wou bygevoeg        |
| 90  |    | het by hierdie lys? Is alles omtrent gedek?  |
| 91  | P3 | Ja, dis okay.  |
| 92  | I  | Kom ons kyk na die paragrafie. Ons het gesê: <i>Teachers must be enthusiastic.</i>   |
| 93  |    | <i>Otherwise learners will pick it up and it will also be negative. Continuous</i>   |
| 94  |    | <i>assessment let your learner progression. The educator should recognize prior</i>  |
| 95  |    | <i>knowledge. The teacher as facilitator will ensure their positive involvement.</i> |
| 96  |    | <i>They learn best when they use their senses. Encourage learners to think for</i>   |
| 97  |    | <i>themselves. Learners learn better when they participate in small group</i>        |
| 98  |    | <i>activities. Let learners explore on their own. Problem-solving.</i>               |
| 99  | P3 | Ja, soos vandag kon hulle gekyk het wat sink en wat dryf toe ons met die             |
| 100 |    | saadjies gewerk het en wel, dis nie regtig problem oplossing nie maar dis            |
| 101 |    | denke.   |
| 102 | I  | Daar was wel probleem oplossing – die dogtertjie wat die vergrootglas                |
| 103 |    | verkeerd vasgehou het.   |
| 104 | P3 | Dis reg, en toe omgedraai het en toe self gesien het en die probleem opgelos         |
| 105 |    | het.   |
| 106 | I  | Goed. Kom ons gaan na die volgende enetjie. Dis barriers or hindernisse.             |
| 107 |    | Ervaar jy hindernisse in jou klas? Veral, met die oog op                             |
| 108 | P3 | Die taal. Die feit dat hulle in die tweede taal onderrig word, dis 'n hindernis      |
| 109 |    | waaraan 'n mens baie hard kan werk.  |
| 110 | I  | Kan jy enigsins Xhosa praat?   |
| 111 | P3 | Glad nie. Vir my is dit die regte ding om die taal wat jy aanleer, deur medium       |
| 112 |    | van daai taal aan te leer. Ek weet die Anglaise Francaise werk ook so. As jy         |
| 113 |    | Frans leer, hulle gebruik nie een word van Engels om vir jou te verduidelik nie.     |
| 114 |    | Deur die medium van Frans leer jy Frans. Dis nogal 'n konsep wat ek dink             |
| 115 |    | werk. Want sodra jy begin om in hulle eie taal te praat raak dit maklik om terug     |
| 116 |    | te stel.   |
| 117 | I  | Sê vir my, hierdie leerders, gaan hulle na 'n moedertaalonderrig skool toe of        |

|      |    |   |
|------|----|---|
| 118  | P3 | Nee, hulle ouers voel baie sterk dat hulle na Engelse skole toe gaan. Hulle wil     |
| 119  |    | hê hulle moet Engels leer, dis hoekom hulle hier sit, en hulle wil graag na G of    |
| 120  |    | O of V of daai skole toe gaan.  |
| 121  | I  | Goed. Afgesien van die taal, enige ander hindernisse wat jy van tyd tot tyd         |
| 122  |    | opmerk?   |
| 123  | P3 | Nogal 'n ding wat altyd opduik is posisie in die ruimte. 'n Tipe... om een of       |
| 124  |    | ander rede, jy weet, is dit nogal iets wat as 'n geheel by hulle ....Daar word      |
| 125  |    | beweer dat dit is omdat hulle geabba is, dat hulle nie gekruip het nie, dat hulle   |
| 126  |    | nie dus posisie in die ruimte kon verken het nie, uhm, ek het selfs al vantevore    |
| 127  |    | die bewering gehoor dat kinders wat in 'n ronde hut grootgemaak word, sal ook       |
| 128  |    | persepsie probleme he wat nie hier nou die geval is nie. Ja, basies die taal en     |
| 129  |    | posisie in die ruimte.  |
| 130  | I  | Posisie in die ruimte. En hoe, uhm, so posisie in die ruimte beïnvloed jou          |
| 131  |    | gesyferdheid dan ook ne, want jou getalsbegrip, hulle kan nie verstaan wat          |
| 132  |    | volgende is en hoe dit bymekaar uitkom nie.   |
| 133  | P3 | Ja, ja, soos as hulle byvoorbeeld uhm, pennetjiesbord doen, daai persepsie          |
| 134  |    | wat op die verteenwoordig die boonste ry, hierdie ry op die pennetjiesbord. Ek      |
| 135  |    | moet sê, jy weet, as jy bewus is daarvan, dan begin jy reg van die begin af,        |
| 1366 |    | daaraan werk. Ek dink dit het al verbeter.  |
| 137  | I  | Goed. Formele skryf is nie deel van die kurrikulum nie maar het jy gevind dat       |
| 138  |    | kinders al begin om syfers te skryf?  |
| 139  | P3 | Ja, hulle sal syfers skryf, name, ja, maar hulle leer dit partykeer by die huis of  |
| 140  |    | ek sal vir hulle wys, jy weet, hoe om syfers op die regte manier te maak.           |
| 141  | I  | Het jy gevind dat daar baie omruiling plaasvind? Uhm, kom ek vra vir jou so.        |
| 142  |    | Het jy ervaar dat hulle as hulle skryf, daar omruiling plaasvind, dat hulle die 6   |
| 143  |    | soos'n 9 lyk?   |
| 144  | P3 | Ja, dit gebeur. Maar nie met almal nie. Daar is wel 'n paartjies wat dit so sal     |
| 145  |    | doen maar dis hoekom as ek sien hulle wil, dan sal ek help en vir hulle die         |
| 146  |    | regte. Ek het nou onlangs vir hulle die regte manier gewys om tot 5 die syfers      |
| 147  |    | te maak.  |
| 148  | I  | Sê net vir my ook, om terug te kom tot die barriers toe, jou kinders wat jy kry, is |

|     |    |  |
|-----|----|--|
| 149 |    | dit kinders wat blootgestel is aan 'n formele kleuterskool agtergrond of kom       |
| 150 |    | hulle van die huis af of van 'n informele creche's af?                             |
| 151 | P3 | Ja, party, ons het 'n groupie, in die skool het ons die vierjariges wat vyf word,  |
| 152 |    | en dan kom hulle na die senior groep waar hulle ses word. So jy sal van hulle      |
| 153 |    | hê, 'n persentasie in die klas sal in K gewees het, en dan deur daai               |
| 154 |    | dagprogramme wat ons volg, dan het hulle daai agtergrond. Een of twee jaar         |
| 155 |    | wat hulle dit gehad het, of van hulle kom nuut in waar hulle glad nie in 'n groep  |
| 156 |    | was nie en ander weer in groupies waar dit blyk daar nie veel aangegaan het        |
| 157 |    | nie. Want hulle kan nie die basiese goed soos knip en inkleur doen nie. En         |
| 158 |    | so, jy sit met hierdie Soos ek gesê het, daar is van hulle wat, wie se ouers is    |
| 159 |    | onderwysers of polisie en daar is ouers wat wel al bewus is van sulke dinge by     |
| 160 |    | die huis voorbereiding te doen. Ander, as die skool begin, dan het ons             |
| 161 |    | onderhoude met hulle en laat hulle leiding kry hoe om by die huis die kinders te   |
| 162 |    | help en om aangemoedig te word om boeke ut te neem of om opvoedkundige             |
| 163 |    | speletjies te gaan koop, legkaarte en so aan. Maar dit is so dat party het maar,   |
| 164 |    | daar is nie altyd baie, jy kom nie agter daar is baie aandag gegee aan hierdie     |
| 165 |    | tipe van dinge wat ons in ons dagprogram inwerk by die huis nie; selfs al is dit   |
| 166 |    | partykeer onderwysers  |
| 167 | I  | So dit gebeur dan in 'n groot mate dat van jou hindernisse milieugestremtheid      |
| 168 |    | kan wees?  |
| 169 | P3 | Ja, dit is definitief so.  |
| 170 | I  | Sê net vir my, uhm, hoe is jou gevoel oor jou manier of jou kennis oor hoe om      |
| 171 |    | hierdie hindernisse te oorkom. Voel jy dat jy opleiding nodig het? Is jy, uhm,     |
| 172 |    | gemaklik, voel jy jy kan enige barrier wat in jou klas geïdentifiseer word, kan jy |
| 173 |    | hanteer?   |
| 174 | P3 | Ja, ek dink so. Ek dink 'n mens is opgewasse. Wel ek is deeglik opgelei in         |
| 175 |    | kindertuin, wat ons destyds kindertuin genoem het en later in pre-primer. So       |
| 176 |    | dit was nie net sommer 'n twee drie maande kursus nie. Dit was deeglike            |
| 177 |    | twee jaar, drie jaar opleiding. Ek is twee jaar opgelei in primere opleiding en    |
| 178 |    | die derde jaar in kindertuin en toe nou deur Unisa pre-primêr                      |
| 179 | I  | Hulle het vir jou geleer om dit te hanteer soos                                    |

|     |    |  |
|-----|----|--|
| 180 | P3 | Ja.  |
| 181 | I  | Byvoorbeeld die omruiling van getalle.   |
| 182 | P3 | Ja, dis leerprobleme en die oorsake en die hantering daarvan, is deeglik         |
| 183 |    | ingewerk in die kursus.  |
| 184 | I  | Goed. Kom ons kyk wat die groep gesê het, hulle het ook hoofsaaklik genoem       |
| 185 |    | dat taal 'n groot hindernis en dat dit 'n beperking is. Hulle het wel gesê dat   |
| 186 |    | hierdie hindernisse lei tot meer papierwerk. Stem jy saam daarmee?               |
| 187 | P3 | Uhm, wel ek doen nie meer papierwerk nie. Die taalprobleme spreek ek             |
| 188 |    | prakties aan deur dit prakties in my lesse in te bring. Ons stel ook 'n ekstra   |
| 189 |    | onderwyseres aan wat inkom vir ekstra Engels om die taalprobleem te help         |
| 190 |    | hanteer sodat elke kind 'n half uur ekstra spesiaal Engelse klasonderrig kry per |
| 191 |    | week. So dis hoe ons dit hanteer en in ons klasse werk ons dit in elke faset in  |
| 192 |    | wat jy sal probeer om woordeskat uit te brei, taal, grammatika werk uhm.         |
| 193 | I  | So jy voel nie dat hindernisse vereis meer papierwerk nie?                       |
| 194 | P3 | Ek doen nie meer papierwerk as gevolg van hindernisse nie.                       |
| 195 | I  | Toe het ons gesê hindernisse blokkeer leer en dan het ons gesê dit is            |
| 196 |    | belangrik vir progressie en dan ook reinforcing, wat is dit hervaslegging en     |
| 197 |    | repetering daarvan is ook belangrik.   |
| 198 | P3 | Ja.  |
| 199 | I  | Wat baie sterk deurgekom het is uhm, jy moenie enige van die                     |
| 200 |    | ontwikkelingsfases uitlos nie, nie te vinnig na abstrak te beweeg nie, jy moet,  |
| 201 |    | netnou toe ons begin het met die learner involvement het jy gesê jy begin met    |
| 202 |    | die kind se liggaam.   |
| 203 | P3 | Ja.  |
| 204 | I  | En dat hulle baie sterk kineties werk en tas?                                    |
| 205 | P3 | Senses.  |
| 206 | I  | Sintuïe werk daarmee. Ek moet sê ek het dit vandag gesien in veral jou           |
| 207 |    | kreatiewe aktiwiteit was daar veral geweldige aksie van die klei wat hulle met   |
| 208 |    | die hande kon vorm, was daar waar hulle met die vingertjie om kleure te meng     |
| 209 |    | en voor hulle kon knip moes hulle ook die vinger gedruk het. Dit het ook baie    |
| 210 |    | sterk deurgekom. En op, en dan sê ons hier werkboeke formeel oppas. Baie         |

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| 211 |    | ouens voel werkboeke help hulle om die hindernis te oorkom en dis nou meer               |
| 212 |    | leerprobleme soos dat hulle ...  |
| 213 | P3 | Ek sou ook sê dat die werkboek, dis wat nou voor die nuwe bedeling, dat die              |
| 214 |    | inspektrise gesê het glad nie werkboeke vir die hele groep nie. Net as jy die            |
| 215 |    | probleem geïdentifiseer het werk dan met daai kind individueel, werkvelle wat            |
| 216 |    | daarop gerig is maar ons was nooit toegelaat om vir die hele groep werkboeke             |
| 217 |    | te he nie. Dit was slegs vir waar jy 'n probleem geïdentifiseer het.                     |
| 218 | I  | Hoe baie gebruik jy boeke?   |
| 210 | P3 | Wel die ouers koop dit aan in die begin van die jaar en ek raak nie daaraan              |
| 211 |    | voor na die eerste ses maande nie. Ek sal voor dit so hier en daar werkvelle             |
| 212 |    | doen, net om hulle gewoon te maak aan om op so 'n manier te werk en uhm,                 |
| 213 |    | net te voel op watter vlak is hulle en of hulle gerreed is ek oefen geen druk uit        |
| 214 |    | om daai tipe van formele werk te doen as hulle nie gereed is nie. Dan glo ek             |
| 215 |    | daaraan dat hulle baie meer die, wat is die woord?                                       |
| 216 | I  | Konkreet?  |
| 217 | P3 | Konkreet te werk. So ...   |
| 218 | I  | So die werkboek is eintlik net die laaste ding wat jy gaan doen?                         |
| 219 | P3 | Dis reg.   |
| 220 | I  | Van konkreet na kineties?  |
| 221 | P3 | Ja.  |
| 222 | I  | Drie dimensioneel na abstrak. Ok, goed. So jy is nie baie ten gunste van                 |
| 223 |    | hierdie werkboeke nie.   |
| 224 | P3 | Dit het 'n plek maar dit moet spaar, jy weet, versigtig gebruik word.                    |
| 225 | I  | Ja, goed. Kom ons kyk na die beskrywende paragraaf. Ekskuus, voor ek                     |
| 226 |    | daarheen toe gaan, is daar iets wat jy wou bygevoeg het?                                 |
| 227 | P3 | Nee.   |
| 228 | I  | Goed, kom ons gaan aan. <i>Alert educators to possible problems, uhm, to plan</i>        |
| 229 |    | <i>lessons around barriers e.g. child with language barriers learn quicker with</i>      |
| 230 |    | <i>visual aids, repetition instills better learning, especially for learners with a</i>  |
| 231 |    | <i>second language. There is a lot of paperwork which can become a barrier –</i>         |
| 232 |    | <i>instead of teaching, the teacher and the learner are too involved with paperwork.</i> |

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| 233 | P3 | Dit is so, jy weet, as 'n mens met al hierdie LS's, wat is al daardie goed, as jy   |
| 234 |    | alles moet uitskryf, dis vir my vreeslik baie papierwerk. En uhm, wat jou           |
| 235 |    | beplanning betref ...   |
| 236 | I  | Jou papierwerk kan 'n barrier word?   |
| 237 | P3 | Ja.   |
| 238 | I  | Dat dit 'n hindernis word vir jou om uit te voer?                                   |
| 239 | P3 | Ja, terwyl jy dit in jou kop alles kan koordineer en veral as jy deeglik opgelei is |
| 240 |    | en veral as jy jare se ondervinding het, 35 jaar plus ondervinding het dan die      |
| 241 |    | feit in aanmerking genome dat jy presies weet waar jou groepe is, wat hulle         |
| 242 |    | kan doen, so jy weet elke dag waaraan jy hier aandag moet gee of daaraan.           |
| 243 |    | Dis moeilik om dit so te beplan en so te uhm, korrelleer nie. Dit gaan nie altyd    |
| 244 |    | korrelleer met waar die groep is nie.   |
| 245 | I  | Goed, ons sal nou-nou weer terugkom na die beplanning as 'n fase, maar jy sê        |
| 246 |    | dan ook, eintlik is dit meer 'n hindernis vir die onderwyser as vir die leerder?    |
| 247 | P3 | Ja.   |
| 248 | I  | Eintlik word die leerder sekondêr, want jy is so besig om te beplan, dat jy nie     |
| 249 |    | tyd het om aan hulle aandag te gee nie.   |
| 250 | P3 | Ja, dis hoe ek voel.  |
| 251 | I  | Goed. <i>It must be practical. It is important to understand concrete concepts</i>  |
| 252 |    | <i>before moving on to abstract concepts.</i>                                       |
| 253 | P3 | Ja.   |
| 254 | I  | Kom ons gaan na die volgende enetjie toe en dit is die onderwyser se houding        |
| 255 |    | teenoor gesyferdheid in die algemeen. Jy het netnou genoem dat jy baie sterk        |
| 256 |    | daaroor voel omdat jyself 'n belewenis gehad het van negatiewe ervarings met        |
| 257 |    | gesyferdheid, met 'n onderwyser wat jou negatief gemaak het en wat jy nie wil       |
| 258 |    | oordra aan kinders. Hoe hanteer jy 'n kind wat negatief is teenoor                  |
| 259 |    | gesyferdheid?   |
| 260 | P3 | Wel ek probeer maar, wel ek plaas geen druk. Ek probeer basies dat hy net           |
| 261 |    | daaraan blootgestel is en dit as pret ervaar deur dit so aan te bied. En net        |
| 262 |    | stadig begin aan te moedig dat spontane deelname plaasvind. Dat hy nie              |
| 263 |    | bedreig voel daardeur nie.  |

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| 264 | I  | Goed.   |
| 265 | P3 | En uhm, prys hom. Aanmoediging om 'n taak te lewer en om hom belangrik te           |
| 266 |    | laat voel en baie daarvoor geprys word en sodat hy net vry kan voel om              |
| 267 |    | himself te wees.  |
| 268 | I  | Goed. Ek wil terug kom na die juffrou se houding. Jy het netnou genoem dat          |
| 269 |    | jy voel dat die beplanning vat baie tyd. Jy het alles in jou kop. Sal jy sê dat jou |
| 270 |    | houding teenoor beplanning is positief of negatief?                                 |
| 271 | P3 | Negatief. Skriftelike beplanning of of daar moet enige beplanning wees              |
| 272 |    | skriftelik. Maar ek hou nie van hierdie wat jy so breedvoerig moet uitskryf nie,    |
| 273 |    | daarby, ek voel 'n mens kan dit korter uitskryf.                                    |
| 286 | I  | Goed. Kan ek vir jou vra voordat die nuwe kurrikulum ingekom het, was dit           |
| 287 |    | van julle toe verwag om skriftelike beplanning te doen?                             |
| 288 | P3 | Ja. Dit was vir my aanvaarbaar want dit was nooit duidelik uiteengesit. Elke        |
| 289 |    | les, elke, soos jou dagprogram vorder, was dit breedvoerig uitgeskryf. Ek het       |
| 290 |    | net meer van daai manier van beplanning gehou.                                      |
| 291 | I  | Terwyl nou, is dit vir jou meer geforseerd, die beplanning?                         |
| 292 | P3 | Ja, en ek moet sê, elke keer as 'n mens by so 'n kursus is, is almal negatief       |
| 293 |    | daaroor hoor. Hulle kla almal agterna maar hulle mag nie en hulle is bang dat       |
| 294 |    | hulle pos of werk in die gedrang is. Maar daar het selfs onderwyseresse die         |
| 295 |    | beroep verlaat as gevolg van hierdie nuwe tipe ...                                  |
| 296 | I  | Beplanning.   |
| 297 | P3 | Ja, enuhm, so daar was baie negatiwiteit. Ek weet nie of dit altyd uitgekom het     |
| 298 |    | nie, maar agteraf as mense met mekaar gepraat het, dan was dit baie duidelik.       |
| 299 | I  | Goed, dit was nou suiwer omdat die beplanning nou meer die leerprogram, die         |
| 300 |    | werkskedules en die lesbeplanning te kry dat dit nou gebaseer is op die             |
| 301 |    | spesifieke uhm, leeruitkomste en die spesifieke, wat is dit,                        |
| 302 |    | assesseringstandaarde. Hoe voel julle ouens oor assessering. Is dit nie ook         |
| 303 |    | maar vir julle baie beplanning nie?   |
| 304 | P3 | Nee, dit is baie belangrik om presies te weet van waar elke faset is. Die           |
| 305 |    | assessering ...   |
| 306 | I  | So daai papierwerk pla jou nie.   |

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| 307 | P3 | Nee.   |
| 308 | I  | Want jy weet hoekom jy dit wil doen?   |
| 309 | P3 | Ja.  |
| 310 | I  | Goed. Ons sal netnou weer terugkom na die beplanning toe, en meer                          |
| 311 |    | spesifiek die assessering toe, kom ek kyk net wat die groep gesê het. Dit was              |
| 312 |    | nou na aanleiding van die eerste werksinkels en hierdie persoon het gesê: <i>I</i>         |
| 313 |    | <i>asked a lot of questions as I was afraid of how I am going to deliver it to a</i>       |
| 314 |    | <i>child, I believe it will lead the young ones to greener pasture, I feel that it was</i> |
| 315 |    | <i>really important to teach learners to count using days of the week, I feel that</i>     |
| 316 |    | <i>the learners are learning best by doing it practical – some learn it through</i>        |
| 317 |    | <i>rhymes. I felt miserable at my first workshop.</i> Hoekom dink jy het iemand dit        |
| 318 |    | so gesê?   |
| 319 | P3 | Ek weet nie. Weet jy wat, wat ek dink gebeur het, is dat in die begin, die                 |
| 320 |    | mense wat dit aangebied het, dit was vir hulle ook nuut, hulle was self, die               |
| 321 |    | prentjie was nie altyd duidelik niemand nie. Ons het altyd gesê hulle mors baie            |
| 322 |    | tyd, want kort-kort word daar iets aangebied maar dan word dit 'n bietjie                  |
| 323 |    | verander met die volgende werksinkel en dan kom hulle agter dat dit nou                    |
| 324 |    | weer beter werk as die ander. Hulle moes dit beter, sê nou maar, soos wat                  |
| 325 |    | ons dit nou kry, boeke met alles daarin. Dit haal die druk van die onderwyser              |
| 326 |    | af, jy kan dit alles gebruik. Presies uitgewerk in die boeke wat jy nou kry. Ja,           |
| 327 |    | hulle moes met daai goed reg in die begin te voorskyn gekom het, en                        |
| 328 |    | daarvolgens kon hulle, sou dit die onderwysers baie meer gehelp het om die                 |
| 329 |    | opleiding in die klas te sien. Dit is dag tot dag uitgewerk en jy kan dit net so           |
| 330 |    | aanbied. En dit het baie tyd en geld gemors want hierdie opleidingskursusse                |
| 331 |    | het die staat seker baie geld gekos, want die aanbieders is seker betaal, die              |
| 332 |    | mense is uit hulle skole gehou, baie keer was dit in skooltyd gewees en daar               |
| 333 |    | was groot verwarring en negatiwiteit. Hulle moes beter voorbereid gewees het               |
| 334 | I  | Hoeveel keer per jaar gaan julle na hierdie tipe van opleiding toe?                        |
| 335 | P3 | Dit werk so gemiddeld, een na twee 'n jaar uit. Ek is nie 100% seker nie maar              |
| 336 |    | seker so.  |
| 337 | I  | Sien jy uit na hierdie opleidingsessies?   |

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| 338 | P3 | Niks, dit draal, dis lank uitgerek, dit voel baie keer vir my dis asof mense nou      |
| 339 |    | opgelei word vir die eerste keer, asof hulle nie agtergrond het nie.                  |
| 340 | I  | So daar word nie aan jou behoeftes voorsien nie.                                      |
| 341 | P3 | Ek sal meer belangstel in spesifieke kennis, soos wat ons 'n paar jaar gelede         |
| 342 |    | gedoen het. Wat gerig is op uitbreiding van kennis wat jy reeds het. Sê nou           |
| 343 |    | maar kreatiewe denke of jy weet, meer gefokus op goed wat jy, wat uitbreiding         |
| 344 |    | is van wat jou kennis is. Maar ek kan verstaan, hierdie is nou 'n nuwe, 'n            |
| 345 |    | heeltemal nuwe onderrigmetode wat, ek verstaan dat daai opleiding moet                |
| 346 |    | gebeur. Ek het gevind dat baie keer dat hulle jou groepe dinge laat doen dat          |
| 347 |    | daar tyd gegee word om dinge uit te werk in jou groepsverband. Maar dat daar          |
| 348 |    | te veel tyd daarvoor gegee word en dan raak dit maar net 'n geselsessie. En           |
| 349 |    | ek meen dit mors tyd. Almal sit maar net later en ander dinge praat en terwyl         |
| 350 |    | hierdie taak wat jy gehad het, lankal klaar kon gewees het.                           |
| 351 | I  | Goed. Kom ons gaan 'n bietjie verder aan wat hulle gesê het. Party voel hulle         |
| 352 |    | het weer geleer, nuwe idees gekry, sien nou die groter geheel, verstaan               |
| 353 |    | hoekom dit gebeur, en uhm, hier sê die een: <i>Think my learners have a</i>           |
| 354 |    | <i>numeracy background.</i> Glo jy ook daaraan dat leerders skooltoe kom met          |
| 355 |    | reeds 'n ...?   |
| 356 | P3 | In 'n mate. Hulle kan gewoonlik al tel reeds, en dan maak ek net seker of hulle       |
| 357 |    | kan voorwerpe tel. Daar is 'n mate daarvan maar nie ...                               |
| 358 | I  | Getalsbegrip? Het hulle 'n getalsbegrip of tel hulle maar net meer 'n rympie?         |
| 359 | P3 | Nee, nie almal het 'n getalsbegrip nie. Maar daar is 'n persentasie wat kan 1 vir     |
| 360 |    | 1 kan tel, wat nie net maar 'n rympie sê nie. Hulle kan voorwerpe 1 vir 1 tel.        |
| 361 | I  | Goed, dan sê party mense <i>Workshops was always interested and fun.</i> Maar jy      |
| 362 |    | het dit anders beleef soos ons nou gesê het. Goed kom ons kyk na die                  |
| 363 |    | paragrafie toe: <i>Positive attitude towards numeracy encourages learners to be</i>   |
| 364 |    | <i>actively involved in activities. Workshops learn new ideas for the development</i> |
| 365 |    | <i>of the children. The teacher must make activities fun for the learners to do.</i>  |
| 366 |    | <i>The teacher must be positive to change. Got a lot of clarity at the workshops,</i> |
| 367 |    | <i>things we didn't understand. Prior knowledge and knowing the child's</i>           |
| 368 |    | <i>background and his potential Interaction with other Grade R educators brings</i>   |

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| 369 |    | <i>a lot of change because it enlightens the teachers.</i>                      |
| 370 | P3 | Dit is Die een voordeel van daardie kursusse is dat mens in kontak kom met      |
| 371 |    | ander Gr R onderwyseresse en net daai interaksie is lekker, net daardie         |
| 372 |    | geleentheid wat geskep word om met hulle te kan gesels en ...                   |
| 373 | I  | Het julle net, is dit al kontak wat jy het met ander Gr R onderwyseresse van    |
| 374 |    | ander skole? Slegs op die workshops?  |
| 375 | P3 | Nee, ons het 'n Gr OOO vereniging. Dit sluit nou al hierdie groepies in wat by  |
| 376 |    | huise is enne dis maar so een maal 'n maand. Dit gebeur nie altyd so nie        |
| 377 |    | maar dis veronderstel dat almal een maal 'n maand 'n byeenkoms te wees          |
| 378 |    | sodat almal 'n beurt kry om iets te reël wat van belang is.                     |
| 379 | I  | Andersins, jou unie, woon jy enige iets wat jou unie wat Gr R goed              |
| 380 |    | aanbied by?   |
| 381 | P3 | Nee, wat ek gedoen het was op 'n stadium was die hoofde simposium wat           |
| 382 |    | gewoonlik in Port Elizabeth is, van die SAOU en dan het ons op 'n stadium       |
| 383 |    | was daar ook 'n spesiale sessie waar die Gr R bymekaar gekom het. Maar          |
| 384 |    | hierdie beheerraad wat ek nou het het besluit dat die skool nie daarvoor sal    |
| 385 |    | betaal nie. So dis nou al seker vir twee drie jaar wat ek nie meer gegaan het   |
| 386 |    | nie. En dit was altyd baie leersaam en dit was daai tyd van hoofde oor die      |
| 387 |    | land, pre-primere hoofde wat saam kon gesels .                                  |
| 388 | I  | Enige ander professionele stimulasie wat jy kry?                                |
| 389 | P3 | Wel dis net as die distrikskantoor iets reël. Ons het nou die Gr 0 , daar's nie |
| 390 |    | iets anders wat ons ...   |
| 391 | I  | Voel jy dis 'n behoefte?  |
| 392 | P3 | Ja, tensy die skool self privaat persone kry soos oor ...                       |
| 393 | I  | Dissipline?   |
| 394 | P3 | Ja . Ons het nou, ek en A het nou na Port Elizabeth gegaan, 'n vrou het daar    |
| 395 |    | iets aangebied maar dit was regtig nou glad nie leersaam. Ek meen dis nie       |
| 396 |    | iets wat ek tot nou toe prakties geïmplementeer het nie. Maar daar is sulke     |
| 397 |    | geleenthede maar ek voel 'n mens moet baie mooi kyk na daai goed. Almal wil     |
| 398 |    | nou op die wa klim en geld maak deur iets aan te bied en dit was miskien daar   |
| 399 |    | die geval. So 'n mens moet seker maak dat as jy die skool se geld gaan          |

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| 400 |    | spandeer dat dit iets regtigs relevant is.                                      |
| 401 | I  | Kom ons gaan nou oor na beplanning toe. Ons het al begin raak aan               |
| 402 |    | beplanning waar jy vir my gesê het dit vat baie tyd om te maak. Sê net vir my,  |
| 403 |    | jou beplanning, voor 96 was daar volgens wat ek kon navors nie regtig 'n        |
| 404 |    | formele wiskunde of gesyferdheidskurrikulum soos wat ons nou het waar ons       |
| 405 |    | sekere goed moet nou bemeester. Volgens Unisa was dit konsepte wat jy           |
| 406 |    | moes bemeester het. Toe het Kurrikulum 2005 gekom en toe het hulle vir die      |
| 407 |    | eerste keer begin om gesyferdheid meer formeel te maak as 'n afgebakende        |
| 408 |    | spesifieke deel van jou dag te maak alhoewel hy geïntegreerd in die             |
| 409 |    | dagprogram voorkom. En met die Hersiene Nasionale Kurrikulum Verklaring is      |
| 410 |    | hy meer afgebaken sodat jy weet aan die einde van hierdie jaar sal kinders      |
| 411 |    | verondersteld wees om aan sekere assesseringstandaarde te voldoen. Is jy        |
| 412 |    | op datum met al die assesseringstandaarde, kyk jy gereeld na die goeters?       |
| 413 | P3 | Ja nee, ek weet presies wat die uitkomstes is wat jy moet bereik.               |
| 414 | I  | So voel jy jy kan al daardie assesseringstandaarde, kyk die uitkomstes is maar  |
| 415 |    | vyf, maar as 'n mens al die assesseringstandaarde, ek dink dit werk uit oor die |
| 416 |    | dertig vir wiskunde wat jy moet doen. Voel jy dat teen die einde van die jaar   |
| 417 |    | jou kinders genoeg blootstelling gekry het dat hulle daardie uitkomste, daardie |
| 418 |    | assesseringstandaarde kan bemeester?  |
| 419 | P3 | Ja, soos wat ek in my dagprogram werk ek nie noodwendig op 'n spesifieke tyd    |
| 420 |    | nie maar jy kan dit orals invleg. Jy kan elke geleentheid gebruik om van dit by |
| 421 |    | te werk. Jy kan orals getalle inwerk. So ek probeer om hulle baie blootstelling |
| 422 |    | te gee.   |
| 423 | I  | En dan fokus jy baie op konsepte, ek sien vandag het jy baie sterk op           |
| 424 |    | teenoorgesteldes gefokus, asook oor op en op verskille gefokus. Wat van         |
| 425 |    | goeters meer soos, ek het nou gesien met jou natuurwetenskap hoekie wat jy      |
| 426 |    | hier gehad het maar selfs met jou temabespreking het jy gepraat van             |
| 427 |    | verandering sal plaasvind en wat sink en dryf in die natuurhoekie. Laat jy die  |
| 428 |    | kinders, stel jy hulle enigsins bloot aan blokkspel waar hulle met vorms werk?  |
| 429 | P3 | Ek gebruik dit dikwels in die oggende, wanneer hulle nog nie almal hier is nie  |
| 430 |    | en hulle aankom, net om 'n vrye keuse aktiwiteit te hê waar hulle met blokke    |

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| 431 |    | kan speel.   |
| 432 | I  | Dan gebruik jy jou opvoedkundige speelgoed ook dan?                              |
| 433 | P3 | Ja.  |
| 434 | I  | As jy legkaarte bou, ek sien daar is brainy blocks ook.                          |
| 435 | P3 | Hulle is, ja, in klein groepies opgedeel dan doen hulle daai tipe van dinge. So  |
| 436 |    | jy sorg dat jy al die fasette bywerk soos manipulasie, ennum numeracy byhet      |
| 437 |    | of visueel of ouditief, verskille sien. Die speletjies verskillende goed aanbied |
| 438 |    | sodat hulle deur die week blootgestel is aan nie net een nie.                    |
| 439 | I  | Ek wil terugkom na die beplanning toe waar jy voel dis geweldig baie werk. As    |
| 440 |    | ek vir jou vra hoeveel uur per dag vat dit jou om 'n hoe lank is jou siklus? 'n  |
| 441 |    | Weeklikse tema of 'n twee weeklikse tema?  |
| 442 | P3 | Twee weke, 'n tema sal gaan oor twee weke  |
| 443 | I  | Twee weke. Kom ons vat hom oor twee weke se tema, hoeveel uur se                 |
| 444 |    | beplanning, waar jy nou letterlik die goed gaan uitskryf en beplan, dink jy dit  |
| 445 |    | vier ure per dag sal wees? So hoe lank vat dit vir jou?                          |
| 446 | P3 | Nee, definitief nie vier ure nie. EK sal dit rofweg doen, weet wat ek wil doen,  |
| 447 |    | wil bereik sê maar oor die twee weke, en dan sal ek dit rerig eers neerskryf as  |
| 448 |    | ek aantekeninge maak terwyl ek onthou wat ek gedoen het sodat wat ek skryf,      |
| 449 |    | is wat hulle gedoen het. Want eEk het gevind as jy, as ek vooruit beplan, dan    |
| 450 |    | gebeur dit baie maal anders as wat dit daar uitgekome het.                       |
| 451 | I  | As jy minister van onderwys was, hoe sou jy die hele beplanning gehanteer        |
| 452 |    | het? Voel jy beplanning is belangrik?  |
| 453 | P3 | Dis soos jy vroeër gese het. Jy weet mense met ondervinding kan jy aanvaar       |
| 454 |    | het die ondervinding, die opleiding. Ek dink om op beplanning te hamer is        |
| 455 |    | veral vir beginners belangrik, dat 'n mens weet hulle kom, begin op die regte    |
| 456 |    | spoor. Ek voel dalk meer vryheid of mense wat mens weet dit kan doen, wat        |
| 457 |    | integreer en korreleer in hulle kop en 'n geheel prentjie het, met al die        |
| 458 |    | opleiding en ondervinding agter hulle, nie so baie goed gaan skryf, net wat ek   |
| 459 |    | basies daar skryf, ek kan verstaan dat as iemand wil kom kyk en seker maak       |
| 460 |    | of die werk gedoen word, dan is dit nodig maar dis vir my 'n hindernis om so     |
| 461 |    | volledig als te doen.  |

|     |    |   |
|-----|----|---|
| 462 | I  | Hulle kan maar net in jou klas kom en kom observe dan sal hulle agterkom wat          |
| 463 |    | jy in jou klasdoen in plaas van om ...  |
| 464 | P3 | Dis reg.  |
| 465 | I  | Eerder om te vra waar's jou leers?  |
| 466 | P3 | Ek vat dit van myself, as ek een is wat moet gaan kyk, opcheck op                     |
| 467 |    | onderwysers en om deur al daai goed te lees, hierdie As moet met daai AS ,            |
| 468 |    | dit voel vir my, ek sal dit nie eers wil doen nie. Ek sal nie daarna wil kyk nie.     |
| 469 |    | Ek sal regtigwaar 'n persoon kan oordeel op wat ek sien as wat ek ...                 |
| 470 | I  | So jy voel, hoe sê die Engelse, die proof is in the pudding?                          |
| 471 | P3 | Ja, wat is die resultate teen die end van die jaar, kan die kind al, is hy waar hy    |
| 472 |    | moet wees?  |
| 473 | I  | Goed, kom ons kyk gou wat die groep gesê het. Hulle het gesê jy moet ook              |
| 474 |    | beplan om jou eie bronne, hulpmiddels te maak, goeie beplanning, how to               |
| 475 |    | present activities to learners, Incidental reading/doing numeracy, Learned            |
| 476 |    | about resources and how to use it, must plan activities, time of day when             |
| 477 |    | numeracy activities are presented is important. Ek dink tog dis belangrik.            |
| 478 | P3 | Ja, numeracy moet elke dag, bedoel hulle daar jy moet 'n spesifieke les elke          |
| 479 |    | dag oor numeracy hê?  |
| 480 | I  | Wat hier baie keer gebeur is dat party skole het 'n skoolgereedheidsperiode           |
| 481 |    | waar hulle dan meer formele numeracy aktiwiteite aanbied. Dit kan spel wees,          |
| 482 |    | legkaarte en opvoedkundige speletjies wees maar dis ook wanneer hulle meer            |
| 483 |    | op werkskaarte fokus. Dis baie meer formeel.  |
| 484 | P3 | Maar jy sien dit kom nog later daarby maar dis nou basies soos ons nou die            |
| 485 |    | quiet play het, want dis basies opvoedkundige speletjies wat ons het, en een is       |
| 486 |    | altyd numeracy, jy weet. Die een is manipulerend, waar hulle ryg of                   |
| 487 |    | pennetjebord, of probleem oplossing of ...  |
| 488 | I  | Kom ons gaan aan. Die beskrywing is: <i>The preparation to present the lesson.</i>    |
| 489 |    | <i>Good planning ensures optimal learning. I plan what I want my learners to</i>      |
| 490 |    | <i>achieve. Good planning involves relevant resources. The time of day is</i>         |
| 491 |    | <i>important as mental work should take place earlier than later in the day – one</i> |
| 492 |    | <i>needs to plan for this.</i>  |

|     |    |  |
|-----|----|--|
| 493 | P3 | Dis wat ek altyd met kindertuin ondervind het jy weet. Jou speelyd wanneer jy    |
| 494 |    | wiskunde doenliewers in die oggend wees as die kinders nog varser is. Daar       |
| 495 |    | is 'n groot verskil as wanneer jy dit aan die end van die dag sal aanbied.       |
| 496 | I  | Ek moet sê ek stem saam met jou as jy sê al beplan jy 'n dag so loop dit nie     |
| 497 |    | noodwendig so nie. Want jy vat baie keer jou que van leerders af                 |
| 498 | P3 | Jy's reg..   |
| 499 | I  | En dan op grond daarvan kan jy ook besluit hoeveel aanmoediging of hoeveel       |
| 500 |    | vraagstelling moet jy hê om hierdie kind te leer om te ontdek. Iets wat ek nie   |
| 501 |    | regtig met beplanning kan neersit nie, is hoe jy 'n kind vat, ek dink Vygotsky   |
| 502 |    | praat van beyond the obvious, met ander woorde as die kind net 'n                |
| 503 |    | syferkonsep of 'n nommergetal het van 5, hoe vat jy hom verby 6 en om 'n ...     |
| 504 | P3 | Groter prentjie.   |
| 505 | I  | Groter prentjie te kry en te leer sonder om hom te druk en te voel en dit kan    |
| 506 |    | beplanning nie regtig vir jou sê nie, dit hang van individuele assessering van   |
| 507 |    | die kind af.   |
| 508 | P3 | Dis hoekom ek vir jou sê jy weet, 'n mens die groter prentjie vir hulle kan wys, |
| 509 |    | wat ek vir jou gesê wat ek maak met getalle, sonder dat hy geïntimideer is of    |
| 510 |    | bedreig is. Hoe jy dit aanbied is 'n belangrike ding. Jy wil nog steeds sy       |
| 511 |    | selfbeeld behou, jy wil hom nog steeds oopmaak vir leer, oop hou vir leer en     |
| 512 |    | as jy soos jy sê iets beyond wil vat moet jy versigtig wees sê nou maar die een  |
| 513 |    | wat dit glad nie kan doen nie, nou laat toeslaan, dat hy nou moedeloos raak, jy  |
| 514 |    | moet weet wat jy doen.   |
| 515 | I  | So, kan ek jou so vra, kom ek gee vir jou 'n stelling dan kan jy vir my sê jy    |
| 516 |    | verskil, wat ek aflei uit jou argumente wat jy aan my genoem het, kom dit        |
| 517 |    | daarop neer dat beplanning is belangrik in die opsig dat jy die                  |
| 518 |    | assesseringstandaarde vat as 'n algehele oorsig van wat die kind moet hê, so     |
| 519 |    | die assesseringstandaarde is belangrik want dit gee vir jou die riglyne wat die  |
| 520 |    | kind moet wees. Op grond daarvan doen jy in jou kop baie keer beplanning en      |
| 521 |    | op grond van daardie aktiwiteite wat die kind doen, vind die assessering plaas   |
| 522 |    | dat jy kan sê hierdie kind het op grond van hierdie aktiwiteit die               |
| 523 |    | assesseringstandaard bedinges. So daar is 'n informele of 'n goue draad          |

|     |    |  |
|-----|----|--|
| 524 |    | tussen die assesseringstandaarde, aktiwiteit assessering om te sien of daar          |
| 525 |    | progressie is. Maar dit hoef nie noodwendig so formeel uitgeskryf te word nie.       |
| 526 |    | Van die drie vlakke wat hulle voorskryf nie.   |
| 527 | I  | Goed, kom ons gaan aan na ons volgende ene. Ek gaan hom sommer hier                  |
| 528 |    | noem, is die konsepte wat baie sterk uitgekome het. Sê vir my wat verstaan jy        |
| 529 |    | onder konsepte?  |
| 530 | P3 | In numeracy?   |
| 531 | I  | Ja.  |
| 532 | P3 | Dis die verskillende konsepte wat jy wil bereik, dat hulle 'n konsep het van,        |
| 533 |    | soos getalsbegrip,   |
| 534 | I  | Sluit die konsepte vir jou baie sterk aan by die assesseringstandaarde of is         |
| 535 |    | hulle vir jou verwyderd van die assesseringstandaarde?                               |
| 536 | P3 | Nee ek sou sê dis deel van die assesseringstandaarde.                                |
| 537 | I  | Hoekom ek vir jou vra is dat ...   |
| 538 | P3 | Toe ek hierdie goed geskryf het, het ek nie aan size en dit, ek het aan ander        |
| 539 |    | goed gedink, maar ek kan nie nou dink wat dit was nie                                |
| 540 | I  | So jy verskil van ...?   |
| 541 | P3 | Nee, ek het nie daaraan gedink nie   |
| 542 | I  | Hoekom ek jou vra van konsepte, want uit my eie ervaring, voor 96 het ons nie        |
| 543 |    | 'n formele kurrikulum gehad nie, maar toe het ons baie sterk op, dit was in die      |
| 544 |    | Transvaal gewees, ek weet nie of dit hier in die Kaap was nie, op konsepte           |
| 545 |    | gewerk. Veral die wiskundige konsepte van teenoorgesteldes, van groot na             |
| 546 |    | klein, daardie tipe van ding, en daarom voel ek die assese, want die mense het       |
| 547 |    | nie geweet watter konsepte gedek moet word nie.                                      |
| 548 | P3 | So dis goed dat hulle dit nou meer uitgestippel is..                                 |
| 549 | I  | Assesseringstandaarde, verstaan die mense, en dit kom weer terug na beplanning toe,. |
| 550 |    | om dit te unpack, te sê, okay, uit hierdie assesseringstandaarde kan ek hierdie      |
| 551 |    | aktiwiteit kry want hierdie assesseringstandaard sê eintlik hoe die konsep van, soos |
| 552 |    | hulle hier praat, van tyd, gedoen moet word. Dis die minimum wat gedoen              |
| 553 |    | moet word.   |
| 554 | P3 | Ja.  |

|     |    |   |
|-----|----|---|
| 555 | I  | Interessant wat jy baie sterk vandag gedoen het, was die horlosie tyd.            |
| 556 |    | Die konsep van tyd beweeg aan, dat jy baie keer na die horlosie terug verwys het. |
| 557 |    | Wat nie regtig 'n assesseringstandaard is nie.                                    |
| 558 |    | Die assesseringstandaard sê Oggend, Middag.                                       |
| 559 | P3 | Dis net 'n tydsbesef op 'n ander vlak.  |
| 560 | I  | So jy het eintlik vir my daar begin om beyond te gaan/                            |
| 561 | P3 | Ja.   |
| 562 | I  | Dis vir my goed want die assesseringstandaarde, soos ek dit verstaan, is die      |
| 563 |    | minimum, ons kan verby gaan.  |
| 564 | P3 | Ja. Jy sien, in die oggend het ons gepraat van daai, toe ons begin het, watter    |
| 565 |    | dag is dit, watter seisoen is dit, en ons doen elke dag jy weet, watter soort     |
| 566 |    | weer is dit, wat is die datum en wat is die dag en watter tyd is dit. As die son  |
| 567 |    | opkom is dit in die oggend en as die son ondergaan is dit in die aand. En al      |
| 568 |    | daardie tydgoeters doen 'n mens baie, ek verstom my partykeer dat hulle na al     |
| 569 |    | die herhaling, soos met die dae van die week jy weet, deuremekaar raak.           |
| 570 |    | Hulle kan die rympie sê maar dan sê ek dis vandag Woensdag, watter dag            |
| 571 |    | was dit gister of gaan dit more wees, dan sê ek wat volg voor, daai voor agter    |
| 572 |    | moet jy ook orals inwerk.   |
| 573 | I  | Dit raak te abstrak, dis hoekom jy sal vind die kinders begin sukkel, dis         |
| 574 |    | abstrak.  |
| 575 | P3 | Maar dit wys jou jy kan numeracy orals inwerk, selfs al doen jy net tyd, voor,    |
| 576 |    | na tipe ding is dit as jy met wiskunde werk.                                      |
| 577 | I  | Ja, definitief. So jy sê ook voor, na ons kan van daai konsepte ook hier          |
| 578 |    | inbring by tyd. Kom ons kyk gou vinnig, hulle het baie sterk op kleur gefokus,    |
| 579 |    | dat dit konkreet moet wees, dis hoekom jy sukkel met tyd, want soos jy sê, tyd    |
| 580 |    | kan jy nie altyd konkreet ...   |
| 581 | P3 | Nee.  |
| 582 | I  | Dis maar 'n ding, dit vat lank, dis vat regtig ,n lang tyd. Weer ervaring,        |
| 583 |    | vergelyking, wat ook baie sterk in jou aanbieding vandag deurgekom het; wat       |
| 584 |    | is groot? wat is klein? Hierdie is maar net ,n aktiwiteit – cups of different     |
| 585 |    | sizes, die dae van die week, min, figure wat ek meer verstaan het nie as figure   |

|     |    |   |
|-----|----|---|
| 586 |    | as sulks nie maar meer die simbole, hoe hulle gevoel het daaroor, many, less,     |
| 587 |    | few, weer getalle, begrip, hoeveelheid, seriation – volgorde.                     |
| 588 | P3 | Weet jy hoe swaar is dit baie keer vir hulle om, ons het hierdie kaartjies vir    |
| 589 |    | hulle, sê nou maar hierdie ou bak koek, en hulle moet dit nou sit van begin tot   |
| 590 |    | end, sulke goed, uhm, ek wil nou juis daarop 'n bietjie konsentreer, hoe volg     |
| 591 |    | dit. Die outjie staan in die oggend op, watter prentjie moet eerste wees? Nou     |
| 592 |    | het hy aangetrek, nou doen hy dat.  |
| 593 | I  | Dit hardloop maar weer terug na tyd toe nê?                                       |
| 594 | P3 | Uhhh.   |
| 595 | I  | En dan het ons genoem die vorms en groottes. Dis waarop dit neergekom het.        |
| 596 |    | Kom ons gaan na die laaste ene toe en dis die klaskameraktiwiteite. Kom ons       |
| 597 |    | kyk sommer direk na wat die groep gesê het. Dis baie dieselfde as wat ons         |
| 598 |    | gesê het is onder konsepte Hier was counting per back to front numbers Weer       |
| 599 |    | die kleur en dat jy dit moet match met objekte en . Wat vir my baie oulik was,    |
| 600 |    | was die ontdekking wat jy ingebring het van die kleure; wat gebeur as jy          |
| 601 |    | hierdie een met daardie een meng? Gaan kyk op die kleurkaart, watter kleur        |
| 602 |    | het jy nog nie gehad?   |
| 603 | P3 | Dis ook om hulle gewoonde te maak van wat lees is, om simbole, dis basies         |
| 604 |    | hoe hulle lees, af van die kaart. En as jy bak en brou doen, maak jy ook sulke    |
| 605 |    | kaarte wat jy teken op en dan lees hulle die resepte af.                          |
| 606 | I  | Sodat hulle dit maklik kan verstaan. Dit was regtig vir my oulik en dan baie      |
| 607 |    | sterk, counting, counting games, counting objects, counting practical, counting   |
| 608 |    | songs, dramatsing rhymes. Al hierdie counting het 'n geweldige groot fokus op     |
| 609 |    | die konsepte wat ons noem Learning Outcome 1, die uhm, wat is hy nou weer,        |
| 610 |    | ag tog, Operations, Relationships, ek sal nou op hom kom, maar                    |
| 611 |    | Leeruitkomste 1 sê eintlik jy moet 45% van jou, as jy moet, is dit daarop. Baie   |
| 612 |    | ouens fokus net op counting en kom nie na die ding terug soos die                 |
| 613 |    | eksperimentering en die ontdekking nie. Wat jy ook vir my gesê het, jy voel 'n    |
| 614 |    | mens moet dit prakties doen, dit help jy sê net vir die kinders rooi en geel maak |
| 615 |    | oranje nie.   |
| 616 | P3 | Hy moet dit voel.   |

|     |   |  |
|-----|---|--|
| 617 | I   | <i>Hy moet dit voel ook, maar hy moet dit self ontdek ook.</i>                   |
| 618 | P3  | Jy sien dan toe T begin, toe sê hy, hy het navy blue gemaak.                     |
| 619 | I   | Dis baie oulik van hom, want dis nie 'n kleur wat jy vir hom genoem het nie.     |
| 620 | P3  | Nee en wat nie op die kaart is nie. Dan begin hulle so speel met daai kleure,    |
| 621 |   | hulle is mal daaroor om so te speel en navy blue is 'n skakering nê? Baie keer   |
| 622 |   | sal hulle nie sulke woorde ken soos skakering.nie.                               |
| 623 | I   | Goed, nou gaan ons na die speletjies wat hulle moet speel soos Geostacks en      |
| 624 |   | party is opvoedkundig, en dan vra hulle, hoeveel maande in die jaar, puzzles,    |
| 625 |   | rhymes, solve problems by themselves het hulle gevoel aktiwiteite moet baie      |
| 626 |   | dit baie sterk weerspieël, sorting kom uit, threading beads kom uit, using       |
| 627 |   | learners themselves by counting how many in their small groups, using months     |
| 628 |   | in a year by naming them. Wat die klaskameraktiwiteite betref het dit vir my     |
| 629 |   | baie sterk uitgekome dat die groep voel dat counting die belangrikste aktiwiteit |
| 630 |   | of konsep is wat moet plaasvind. Stem jy saam of verskil jy?                     |
| 631 |   | P3   |
| 632 | nie. Jy weet as jy wiskundig wil ontwikkel soos begrip van posisie in die         |  |
| 633 | ruimte, voor, agter, daai tipe dinge. Ek kan nie sê dis die belangrikste nie. Dis |  |
| 634 | alles ineen, jy weet, alles skakel inmekaar om die wiskundige begrippe te         |  |
| 635 | vorm, jy kan nie een uitsonder en sê dis belangrik nie. Counting gaan hulle nie   |  |
| 636 | help as hulle alleen daarop konsentreer nie. Al hierdie ander dinge het 'n plek.  |  |
| 637 | I   | Goed. In hierdie klaskameraktiwiteite wat hier genoem word, wat vir my           |
| 638 |   | opvallend is dat ons nêrens praat van werkswelle nie. En tog sien 'n mens baie   |
| 639 |   | werkswelle.wat voorkom.  |
| 640 | P3  | Ja, ek is glad nie 'n voorstaander van werkswelle nie. Tot 'n mate het hy sy     |
| 641 |   | plek, as jy seker gemaak het, jy het die voorafstappe deurgegaan, dat jy dit nie |
| 642 |   | te gou vir hulle aan bekend stel nie en soos ek doen dit eers in die laaste ses  |
| 643 |   | Maande.  |
| 644 | I   | Hoekom vind jy is daar soveel druk dat skole op Graad R onderwyseresse           |
| 645 |   | soveel werkswelle inbring as 'n klaskameraktiwiteit?                             |
| 646 | P3  | Ek weet nie hoekom dit is nie want mense soos, ons opleiding was dit nie hoe     |
| 647 |   | jy dit aanbied nie, ek weet nie waar dit begin het nie. Ek weet nie of die Graad |

|     |    |  |
|-----|----|--|
| 648 |    | I onderwyseresse dit verwag nie, maar ek meen as 'n mens kan nie net               |
| 649 |    | toegee as een iets verwag nie, dan kan jy mos motiveer hoekom jy dit nie so,       |
| 650 |    | jou produk wat jy lewer is, op hierdie jy weet, is gegrond op of wat ons taak is,  |
| 651 |    | om voor te berei. In die ou dae toe ek begin het met Kindertuin en Sub A het       |
| 652 |    | ons 'n hele lang tyd, maklik twee kwartale voorbereiding gedoen voordat die        |
| 653 |    | kinders geskryf of iets gedoen het. Ons het al die goed wat die kleuterskole       |
| 654 |    | doen, gedoen en om dit nou van ons weg te neem, en in 'n groter mate al die        |
| 655 |    | Graad 1 goed te doen, maak nie vir my sin nie.                                     |
| 656 | I  | Goed, ek wil net terugkom na, uhm, ja dat die druk van die skole afkom, dat die    |
| 657 |    | kinders skoolgereed moet wees, maar hulle verstaan nie regtig wat                  |
| 658 |    | skoolgereedheid is nie. Daai ding van ontwikkelingsvlakke, developmentally         |
| 659 |    | appropriate, dit word nie regtig aangespreek nie, dit word in die witskrif         |
| 660 |    | ingeskryf en ook in die, wat was die dokumente, die beleidsdokumente, praat        |
| 661 |    | hulle baie sterk daarvan dat die kind eers moet konkreet werk voordat hulle na     |
| 662 |    | abstrak toe kan gaan. Maar in die praktyk vind mens dat die ouens meer op          |
| 663 |    | hierdie ander, vind jy dat ouers vir jou vra is my kind slim? Kan hy dit of dat    |
| 664 |    | doen?  |
| 665 | P3 | Nee, nie regtig so baie meer nie. Hulle vra graag, jy weet, hoe vorder die kind    |
| 666 | I  | en so aan maar die ouers wat ons nou het, is baie dankbaar vir wat gedoen          |
| 667 |    | word, jy weet. Hulle het waardering van wat gedoen word in die skool maar          |
| 668 |    | hulle sit nie regtig druk op ons oor, hulle verwagtinge is om hulle kinders in     |
| 669 |    | Engels te leer, dis vir hulle belangrik, en verder laat hulle hul deur ons lei. As |
| 670 |    | ons vir hulle sê, ons het gereeld onderhoude met ouers, as ons sê, of skryf in     |
| 671 |    | die boek maak 'n afspraak met die onderwyser, die kind sukkel met dit of kom       |
| 672 |    | sien my of bespreek dit met my, dan is hulle bereid om te help. Hulle doen dit     |
| 673 |    | nie altyd nie, maar die gesindheid is goed. Ja, ek vind dat,                       |
| 674 |    | vroeër jare jy dit ...   |
| 675 |    | baie gekry het dat ouers sal sê, oor angstig is oor kinders en sal sê hoe kan jy   |
| 676 |    | 'n kind skoolgereed maak? Ek sien nie meer daai angstigheid nie, hulle             |
| 677 |    | verwag dat ons dit sal doen en klaar.  |
| 678 |    | Goed, kom ons kyk net na die beskrywende paragraaf: Do not do activity as          |

|     |    |   |
|-----|----|---|
| 679 |    | <i>activity but it should stimulate learners' interest. Activities should go with the</i> |
| 680 |    | <i>theme/topic you are dealing with. All work and no play make John a dull boy.</i>       |
| 681 |    | <i>Teachers should ensure that activities cover all areas of development, e.g.</i>        |
| 682 |    | <i>physical, social, mental. Learners should be involved in all activities as</i>         |
| 683 |    | <i>individuals, pairs or in groups. Learners must be motivated and stimulated by</i>      |
| 684 |    | <i>the classroom activities. Through activities the teacher will be able to identify</i>  |
| 685 |    | <i>special needs. Concepts should be concrete and based on Learning</i>                   |
| 686 |    | <i>Outcomes and Assessment Standards. Jy is OK daarmee?</i>                               |
| 687 | P3 | Ja.   |
| 688 | I  | Mevrou O, baie, baie dankie vir al jou insig en geduld en jou tyd wat jy vir my           |
| 689 |    | gegee het. Baie dankie.   |
| 690 | P3 | Dis 'n plesier.   |

## APPENDIX M

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| <b>TRANSCRIPT OF SEMI-STRUCTURED INDIVIDUAL INTERVIEW:<br/>PARTICIPANT 8</b> |
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I – Interviewer; P8 - Participant 8

| Line | I/P | Transcription   |
|------|-----|---|
| 1    | I   | Mevrou, baie, baie dankie dat jy vir my toegelaat het vandag om jou klas waar |
| 2    |     | te neem en te observe wat aangaan en baie, baie dankie dat ek en jy nou       |
| 3    |     | gaan praat. Is dit reg met jou dat ek 'n bandopname maak?                     |
| 4    | P8  | Geen probleem nie.  |
| 5    | I   | Juffrou, vertel my net ,n bietjie van jousef, hoe lank hou jy nou al skool?   |
| 6    | P8  | Sjoe, nogal lank, sowat 6 jaar.   |
| 7    | I   | Ses jaar en is dit net by Graad R of het jy by ander                          |
| 8    | P8  | Net Graad R. Net by hierdie skool.  |
| 9    | I   | is jy 'n opgeleide kleuterskoolonderwyseres of het jy                         |
| 10   | P8  | Ja.   |
| 11   | I   | Waar het jy opgeleiding gekry?  |
| 12   | P8  | By Port Elizabeth... [unclear]  |
| 13   | I   | Was dit 'n kollege gewees?  |
| 14.  | P8  | Ja.   |
| 15.  | I   | Is dit ouens wat toegemaak het?   |
| 16   | P8  | Ja, ek dink hy het toegemaak. Maar ek dink hy het weer oopgemaak. Maar        |
| 17   |     | ons het educare. Ek weet nie van watter plek nie, maar sy was eers 'n         |
| 18   |     | Kleurling onderwyser gewees in die Kaap.                                      |

|    |    |  |
|----|----|--|
| 19 | I  | Ja?  |
| 20 | P8 | En toe kom die wit juffrou, mrs H, ek weet nie van watter plekkie nie, maar toe    |
| 21 |    | kom sy ook. Ek het dit nie voltooi nie [onduidelik] omdat daar nie spesifieke      |
| 22 |    | fondse betrokke was nie. Ja en toe het ek gaan werk. En toe so oor tien jaar       |
| 23 |    | was hierdie pos beskikbaar en toe kom  |
| 24 | I  | jy eers kom skoolhou, gits, ek sê jou, maar dis wonderlik, dis jou eerste liefde.  |
| 25 | P8 | Ja, ja, ek is nogal baie op dit. Lief vir klein kinders. Ek kan my hele lewe met   |
| 26 |    | hulle deurbring. Ek is baie sag.   |
| 27 | I  | Nee, uhm dissipline? Eintlik is dit beter om sagter te praat want hoe harder jy    |
| 28 |    | praat hoe harder skreeu hulle. Maar hulle moet leer om na jou te kyk, maar         |
| 29 |    | ons sal nou praat oor die dissipline, sê net vir my, hoeveel kinders het jy in jou |
| 30 |    | klas?  |
| 31 | P8 | 46.  |
| 32 | I  | 46? En die ouderdomsgroepe?  |
| 33 | P8 | O, hulle varieer, van 5 tot 6 en 6 tot 7.  |
| 34 | I  | Van 5 tot 6 en 6 tot 7? Het jy outjies wat in Graad 1 moet wees?                   |
| 35 | P8 | Ja. Ek dink ek het omtrent tien.   |
| 36 | I  | So 10? So hulle is outjies wat 8 word?   |
| 37 | P8 | JA, hulle het reeds 7 geword.  |
| 38 | I  | Hulle het hierdie jaar 7 geword? Hulle moes in Graad 1 gewees het?                 |
| 39 | P8 | Ja, hulle moes in Graad 1 gewees het.  |
| 40 | I  | Hoekom is hulle nie in Graad 1 nie?  |
| 41 | P8 | Die Graad 1 was te vol.  |
| 42 | I  | Dit was te vol? Hoeveel Graad 1 klasse?  |

|     |    |  |
|-----|----|--|
| 43  | P8 | Twee. En toe het Meneer dit gemaak om hulle by my in te sit. Dis so, eintlik   |
| 44  |    | die probleem. Die Meneer verkies dat hulle liewers, as hulle van die lokasie afkom, en hulle ken nie Afrikaans, hulle is nie Afrikaans magtig nie, dan stuur |
| 46  |    | hy hulle gewoonlik na my toe, voor hy hulle Graad 1 toe stuur.   |
| 47  | I  | Ongeag hulle ouderdom?   |
| 48. | P8 | Ongeag hulle ouderdom.   |
| 49  | I  | So hy wil hulle eers, julle voertaal Afrikaans?  |
| 50  | P8 | Ja, Afrikaans. Maar die meerderheid is Xhosa sprekende leerders.   |
| 51  | I  | Sê net vir my, hoeveel meisies en hoeveel seuns het jy?  |
| 52  | P8 | 24 meisies. En 22 Seuns.   |
| 53  | I  | ja, dis ook omdat die seuns baie bedrywig was. Hulle was baie woelig. Okay,  |
| 54  |    | juffrou, wat ons vandag gaan doen is om te kyk wat die groep gesê het. Die   |
| 55  |    | groep het 4 temas geïdentifiseer, maar voordat ek gaan kyk na wat die groep  |
| 56  |    | gesê het, wil ek hoor wat jy sê. Die eerste tema wat die groep uitgebring het  |
| 57  |    | was <i>Content</i> . Sê vir my, wat voel jy oor <i>Content</i> ? Wat is jou gevoelens  |
| 58  |    | daaromtrent? Wat is jou kennis daarom?   |
| 59  | P8 | <i>Content</i> is mos jou, is dit nie jou tema?  |
| 60  | I  | Jou tema? Goed, as ek jou vandag moet vra, wat was jou tema gewees?  |
| 61  | P8 | Diere.   |
| 62  | I  | Diere? Die verskillende diere, plaasdiere. Goed. Wat was jou <i>Content</i> ? En   |
| 63  |    | hoe voel jy oor die <i>Content</i> ?   |
| 64  | P8 | Is die, byvoorbeeld, sê jy gaan miskien wiskunde doen. Jy gaan miskien die.,   |
| 65  |    | <i>Content</i> is wat jy doen omtrent die wiskundige vorme, dit is counting, of kleure   |
| 66  | I  | Waar kry jy die <i>Content</i> ? Soos byvoorbeeld met Wiskunde. Waar kry jy dit?   |
| 67  |    | Wat laat jou besluit, ek sien jy het vandag, ag, jy het baie op tel gekonsentreer  |

|    |    |  |
|----|----|--|
| 68 | P8 | Ja.  |
| 69 | I  | Hulle moes die diere tel, die verskillende ... en toe moes hulle ook die doppies     |
| 70 |    | tel, toe jy vormpies met hulle gedoen het nè? Waar, hoekom het jy besluit om         |
| 71 |    | te tel?  |
| 72 | P8 | Dis mos wiskunde, ek konsentreer op die wiskunde.                                    |
| 73 | I  | Okay, is daar iets wat sê julle moet tel,  |
| 74 | P8 | Ja, ja, hulle moet, elke dag tel, sodat hulle bewus kan wees van getalle.            |
| 75 | I  | Getalle. Tel jy net met hulle of doen jy ander goed ook?                             |
| 76 | P8 | Nee, ek doen ander dinge ook. Geletterdheid, in dieselfde tyd wat ons die            |
| 77 |    | verskillende diere se name gedoen het, so hulle het geletterdheid ook, so            |
| 78 |    | basies, dit integreer.   |
| 79 | I  | Dit integreer. Ek wil net terugkom na jou inhoud toe, as jy sê inhoud, is daar,      |
| 80 |    | het jy enige riglyne wat vir jou sê as jy, jy moet hierdie aktiwiteite doen, wat vir |
| 81 |    | jou, waar kry jy dit?  |
| 82 | P8 | Die dokumente  |
| 83 | I  | Die dokumente, die policy documents. Hoe is die inhoud daarvan? Voel jy,             |
| 84 | P8 | Beperk.  |
| 85 | I  | Is jy beperk? Voel jy beperk daarmee? Wil jy nog baie doen?                          |
| 86 | P8 | Jy kan, dis mos nie net gebaseer op 3 nie. Jy kan meer doen as jy wil.               |
| 87 | I  | Vind jy dit help jou, gee vir jou riglyne?   |
| 88 | P8 | Ja, ja. Dit help mens, geweldig.   |
| 89 | I  | Is dit? Ons praat nou meer van die assesseringstandaarde, maar ons sal later         |
| 90 |    | terugkom ... in die beplanning, help dit daarmee ook?                                |
| 91 | P8 | Ja.  |

|     |    |  |
|-----|----|--|
| 92  | I  | Voel jy dat jy almal dek in 'n jaar of is daar 'n klompie wat jy nie regtig by   |
| 93  |    | uitkom nie?  |
| 94  | P8 | Nee, ek kan nie almal nie  |
| 95  | I  | Jy kan nie by almal uitkom nie? Ons praat van die wiskunde nè?                   |
| 96  | P8 | Ja, onmoontlik.  |
| 97  | I  | By al daardie assesseringstandaarde, sukkel om uit te kom?                       |
| 98  | P8 | Ja   |
| 99  | I  | Waarop fokus jy dan? Wat fokus jy dan hoofsaaklik by wiskunde op?                |
| 100 | P8 | Tel  |
| 101 | I  | Tel? Dan het ek ook gesien jy laat hulle die letter, ag simbool vorm.            |
| 102 | P8 | Want ek konsentreer meer op getalle van 1 tot 10. Sodat hulle dit kan vaslê.     |
| 103 |    | Dit is 'n probleem gewoonlik. Ek vra maar altyd vir die Graad 1 juffrouens,      |
| 104 |    | waarmee sukkel hulle?  |
| 105 | I  | Okay, dis die getal 1 tot 10 wat jy wil  |
| 106 | P8 | 1 tot 10 wat ek vaslê.   |
| 107 | I  | Goed. Hoe lê jy dit vas? Net met tel?  |
| 108 | P8 | Nee. Sien en vorm voorwerpe.   |
| 109 | I  | Vorm ook. Goed, doen jy enige patterning of halvering op hierdie stadium?        |
| 110 |    | Of, ek dink in Engels is daar 'n assesseringstandaard "halving and doubling".    |
| 111 | P8 | As ek halving doen, dan is dit maar net basies 'n .... ek het al halving gedoen. |
| 112 |    | Maar dan is dit net basies waar ek vir hulle wys                                 |
| 113 | I  | Wys, soos as jy byvoorbeeld 'n lemoen sny?                                       |
| 114 | P8 | Nee, hulle sny dit nie. Ek wys net vir hulle. Hoe is dit as 'n mens iets deel in |
| 115 |    | die helfte, dan is dit twee ... ek is bang vir messe.                            |

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|-----|----|--|
| 116 | I  | Jy wys vir hulle hoe, met watter, hoe wys jy dit vir hulle dan?                      |
| 117 | P8 | Ek wys dit met 'n model, 'n papiertjie, en ek wys as hulle dit nie verstaan nie,     |
| 118 |    | op die bord.   |
| 119 | I  | Goed, sê vir my, nog iets onder <i>Content</i> , is daar iets wat jy wil byvoeg?     |
| 120 | P8 | By <i>Content</i> ?  |
| 121 | I  | Sukkel jy om <i>Content</i> te kry, jou temas?                                       |
| 122 | P8 | Nee, ons sorg maar dat dit almal dieselfde is.                                       |
| 123 | I  | Julle doen julle beplanning saam met die Grondslagfase, die Foundation               |
| 124 |    | Phase?   |
| 125 | P8 | Ja.  |
| 126 | I  | Almal doen dan byvoorbeeld hierdie week in die grondslagfase die tema van            |
| 127 |    | Diere?   |
| 128 | P8 | Dit hang af hoe jy, seker maar soos die juffrouens aangaan, maar die meeste          |
| 129 |    | van ons gaan maar twee weke op 'n tema. Maar dit hang ook af hoe besig jy            |
| 130 |    | was sodat jy nou nie [onduidelik].   |
| 131 | I  | Het julle 'n jaarprogram wat julle uitwerk in die begin?                             |
| 132 | P8 | Ja.  |
| 133 | I  | Waarvolgens julle temas, en jy sê dit is twee-weekliks, en julle werk                |
| 134 |    | daarvolgens?   |
| 135 | P8 | Ja.  |
| 136 | I  | So dan het julle idee waarvolgens julle julle goed doen.                             |
| 137 | P8 | Ja.  |
| 138 | I  | Kom ek sê vir jou wat die groep gesê het. Kom ons kyk gou hier, dan kan jy vir       |
| 139 |    | my sê of jy nog wil byvoeg. Ons het gesê <i>Content</i> bestaan uit <i>colours</i> , |

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| 140 |    | <i>doubling, constructive</i> - doen jy 'n bietjie <i>construction</i> ?                       |
| 141 | P8 | Ek doen.   |
| 145 | I  | Wanneer doen jy <i>constructing</i> ?  |
| 146 | P8 | Dis ook wanneer die groepies werk.   |
| 147 | I  | Wanneer die groepies werk? Okay. En hoe sal jy dit doen?                                       |
| 148 | P8 | Dis net nie vandag nie.  |
| 149 | I  | So dis net nie vandag gedoen nie, jy doen dit met die groter blokke daar?                      |
| 150 | P8 | Ja.  |
| 151 | I  | Dan het ons nommers wat jy baie vandag gedoen het, die <i>counting</i> wat jy                  |
| 152 |    | vandag gedoen het, <i>sequencing</i> , is dit ook iets wat jy doen?                            |
| 153 | P8 | Mmm.   |
| 154 | I  | <i>Shapes</i> het jy ook gedoen, want jy het die sirkel, die vierkant en die driehoek          |
| 155 |    | gedoen. <i>Data handling</i> data hantering, raak jy daaraan of is dit vir jou 'n vae          |
| 156 |    | ene?   |
| 157 | P8 | Nee, ek raak nogal nie daaraan nie.  |
| 158 | I  | Jy raak nie daaraan nie? So, jy het 'n bietjie opleiding in hom nodig?                         |
| 159 | P8 | Ja.  |
| 160 | I  | So, dis 'n leemte daar. Okay, <i>mathematics</i> ,   |
| 161 | P8 | Dis mos wat ek ...   |
| 162 | I  | Dis basies waar jou <i>counting</i> inkom nê? <i>Massa</i> ? Dis nou meer <i>Measurement</i> , |
| 163 |    | werk jy daarmee?   |
| 164 | P8 | Ek werk met dit ook.   |
| 165 | I  | Werk jy daarmee ook? Goed. <i>Concrete apparatus</i> het ons vandag gesien, die                |
| 166 |    | doppies met wat jy gewerk het. <i>Patrone</i> ? Wat jy gesprink het? Werk jy                   |

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| 167 |    | daarmee ook? Goed. <i>Concrete apparatus</i> het ons vandag gesien, die doppies            |
| 168 |    | met wat jy gewerk het. <i>Patrone</i> ? Wat jy gesprong het?                               |
| 169 | P8 | Ja.  |
| 170 | I  | Jy het buite die patrone gesprong, ja, <i>estimation</i> is dit iets, wat jy skatting doen |
| 171 |    | of nie eintlik op hierdie stadium nie?   |
| 172 | P8 | Nog nie nou nie.   |
| 173 | I  | Nog nie nou nie. So jy het 'n bietjie leemtes daar nodig?                                  |
| 174 | P8 | Ja.  |
| 175 | I  | 'n Bietjie hulp daarmee? Halveer het jy vir my gesê, sortering? Het jy ?                   |
| 176 | P8 | Ja.  |
| 177 | I  | Het jy nou die <i>matching</i> gedoen?   |
| 178 | P8 | Ja.  |
| 179 | I  | Het jy nou die <i>matching</i> gedoen?   |
| 180 | P8 | Mmm, ek doen dit.  |
| 181 | I  | Goed, En <i>Measurement</i> het ons al van gepraat, en versameling? Waar hulle             |
| 182 |    | vir jou goeters bring?   |
| 183 | P8 | Ja.  |
| 184 | I  | Okay, jy doen dit ook? Goed. <i>Content</i> en ek dink dit is nou ook meer spesifiek       |
| 185 |    | wat hulle gesê het, <i>mathematics</i> , al hierdie goed, vorm die <i>foundation for</i>   |
| 186 |    | <i>thoughts and visualisation</i> . Stem jy saam?  |
| 187 | P8 | Ja.  |
| 188 | I  | Daai <i>visualizing</i> , dink ek is meer <i>mental maths</i>                              |
| 189 | P8 | Mmm.   |
| 190 | I  | wat daarop uitkom. En <i>think and reason</i> . Het jy vandag, as jy vandag aan jou        |

|     |    |   |
|-----|----|---|
| 191 |    | aktiwiteite terugdink, het jy vir hulle kans gegee waar hulle kan dink en                       |
| 192 |    | redeneer? Of het dit nie so sterk deurgekom vandag nie.   |
| 193 | P8 | Um-mmm  |
| 194 | I  | Dit het nie so sterk deurgekom nie? Goed, kom ons kyk na die beskrywende,                       |
| 195 |    | wil jy ietsie hierby voeg? Of voel jy, dat dit alles is wat jy dek? Goed. Wat ons               |
| 196 |    | gesê het by die <i>Descriptive paragraph is Numeracy includes the act of</i>                    |
| 197 |    | <i>identifying, constructing, building, and reproducing of</i> en dan al hierdie <i>Content</i> |
| 198 |    | goed wat ons genoem het, <i>counting, doubling, constructing, numbers,</i>                      |
| 199 |    | <i>sequencing, shapes, data hantering, estimation,</i> al hierdie boonste goeters , al          |
| 200 |    | hierdie boonste goeters <i>by the Grade R learner in concrete form nê? In order</i>             |
| 201 |    | <i>to lay a numeracy foundation for later abstract thinking and reasoning.</i> Stem jy          |
| 202 |    | saam? Is daar enige iets onduidelik hier?   |
| 203 | P8 | Nee   |
| 204 | I  | Goed, kom ons gaan na die volgende enetjie toe. Ons het gepraat, en van die                     |
| 205 |    | volgendie temas wat julle geïntereseer het was <i>Enrichment/remedial activities.</i>           |
| 206 |    | Vertel my wat is jou gevoelens daaroor, hoe jy dit beleef, wat is jou kennis                    |
| 207 |    | daarvan?  |
| 208 | P8 | Remedial activities?  |
| 209 | I  | Remedial en enrichment. <i>Enrichment and remedial activities,</i> watter ene wil jy            |
| 210 |    | eerste doen? Vertel my wat is jou ervaringe met <i>remedial activities.</i> Het jy              |
| 211 |    | enige opleiding daarin gehad?   |
| 212 | P8 | Nee.  |
| 213 | I  | Nie? Dis 'n groot leemte vir jou?   |
| 214 | P8 | Dis 'n groot leemte.  |

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|-----|----|---|
| 215 | I  | Sien jy in jou klas kinders wat sukkel?   |
| 216 | P8 | Ja.   |
| 217 | I  | Met wat sukkel hulle? Wat sal jy sê is die grootste probleem?                         |
| 218 | P8 | Soos byvoorbeeld, die tel, as ons miskien tel, ek sien daar is 'n kind wat            |
| 219 |    | miskien tel, dan skip hy  |
| 220 | I  | Hy skip, so hy kan nie een tot een tel nie?   |
| 221 | P8 | So hy kan nie, as hy op sy vingers ook tel, hy kan 1,2,3,4,5                          |
| 222 | I  | So hy kan nie chronologies tel nie?   |
| 223 | P8 | Ja  |
| 224 | I  | Of hy kan dit doen vir so 'n rukkie maar as hy 1 fisiek moet wys, dan kan hy dit      |
| 225 |    | nie doen nie?   |
| 226 | P8 | Hy kan dit nie doen nie.  |
| 227 | I  | Hy kan dit nie doen nie. Goed, sal jy vir my sê, hulle manier van skryf of teken,     |
| 228 |    | is daar enige probleme?   |
| 229 | P8 | Nee   |
| 230 | I  | Nie regtig nie? Hulle hanteer alles reg wat ookal. Goed. Begin hulle al hul           |
| 231 |    | naampies skryf?   |
| 232 | P8 | Ja, 'n hele paar.   |
| 233 | I  | Is daar 'n paar kinders wat jy gevind het, wat byvoorbeeld as hulle 'n 6 maak,        |
| 234 |    | dan lyk dit soos 'n 9? Wat hulle die syfers omdraai?                                  |
| 235 | P8 | Omdraai? Nee.   |
| 236 | I  | Nie regtig nie? Goed. Kom ons kom weer terug na die <i>remedial activities</i> , vind |
| 237 |    | jy daar is enige ander barriers in jou klas?  |
| 238 | P8 | Nee   |

|     |    |   |
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| 239 | I  | Outjies wat woelig is?  |
| 240 | P8 | O, ek het 'n hele paar, ek kan dit noem.  |
| 241 | I  | Is dit? Wat 'n aandag tekort het nè?  |
| 242 | P8 | Dit ook. Hier is.   |
| 243 | I  | Ek kon sien hier is 'n paar outjies wat ...   |
| 244 | P8 | Hier is 'n hele paar.   |
| 245 | I  | wat se aandag draai?  |
| 246 | P8 | Geweldig. En kan baie kere, hulle vat baie van die lesse af.                        |
| 247 | I  | Van die les af wat jy beplan het?   |
| 248 | P8 | Ja.   |
| 249 | I  | Sal jy sê dis 'n bietjie van 'n dissipline probleem? Hulle luister nie na wat jy sê |
| 250 |    | nie? Dat hulle nie reg luister nie?   |
| 251 | P8 | Ek weet nie.  |
| 252 | I  | Hulle agter nie? Dat hulle nie reg luister nie?                                     |
| 253 | P8 | Ek weet nie.  |
| 254 | I  | Hulle agtergrond van hulle huise af, is daar dissipline?                            |
| 255 | P8 | Ja, daar's 'n probleem.   |
| 256 | I  | Daar is dissipline probleme? Dat hulle daar ook nie vir hulle ouers luister nie?    |
| 257 | P8 | Hulle luister nie.  |
| 258 | I  | Is dit in die skool 'n probleem, want toe ons buite was, was daar 'n groot groep    |
| 259 |    | wat ook buite rond geloop het?  |
| 260 | P8 | Dis die hele skool opset.   |
| 261 | I  | Daar is dissipline probleme?  |
| 262 | P8 | Ja.   |

|     |    |  |
|-----|----|--|
| 263 | I  | Dat kinders hulle eie ding wil volg?   |
| 264 | P8 | Hulle eie ding wil doen, en jy kan maar net sê wat jy wil, hulle luister nie     |
| 265 | I  | Hulle luister nie regtig vir jou nie?  |
| 266 | P8 | Ja.  |
| 267 | I  | Goed. <i>Enrichment</i> ? Wat verstaan jy onder <i>enrichment</i> ?              |
| 268 | P8 | <i>Enrichment</i> is wat jy vir hulle kan bied om hulle te verryk                |
| 269 | I  | Wat jy vir hulle kan bied om te verryk, en interessant te maak nè?               |
| 270 | P8 | Ja.  |
| 271 | I  | Doen jy dit of is jou klas te groot op hierdie stadium?                          |
| 272 | P8 | Ek doen dit met van die outjies, daar is 'n hele paar oulikes. Ek gaan met hulle |
| 273 |    | voort, diè wat betrokke wil wees. Ek gaan nie 'n kind forseer nie. As hy nie     |
| 274 |    | betrokke wil wees nie,   |
| 275 | I  | dan los jy hom?  |
| 276 | P8 | Dan gaan ek met die anders aan, wat belangstel. Want daar's 'n hele paar         |
| 277 |    | kinders wat baie, heelwat woelig is en ek kan nie dat hulle my onderkry nie. As  |
| 278 |    | ek saam met daai outjies gaan, dan gaan ek daardie kinders verlore.              |
| 279 | I  | Ja. So jy voel jy fokus op 'n groep wat wil werk.                                |
| 280 | P8 | Ek fokus op die groep.   |
| 281 | I  | Hoe doen jy dan met hulle <i>enrichment</i> ?                                    |
| 282 | P8 | Ek het vir hulle sekere werkvelletjies wat ek vir hulle gee. Vir hulle is die    |
| 283 |    | speletjies, hulle is verby die speletjies, so hulle is in die opset wat hulle in |
| 284 |    | skool terme, dit voel vir hulle  |
| 285 | I  | Dat hulle meer wil werk  |
| 286 | P8 | Ja.  |

|     |    |  |
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| 287 | I  | Sal jy sê jy werk 'n bietjie meer formeel met die outjies omdat jy 'n groep    |
| 288 |    | kinders het, wat al in Graad 1 moes gewees het?                                |
| 289 | P8 | Ja.  |
| 290 | I  | Meer formeel? Baie meer werksvelle?  |
| 291 | P8 | Ek begin al met letters en   |
| 292 | I  | So jy werk baie meer formeel?  |
| 293 | P8 | Ja, ek werk meer formeel.  |
| 294 | I  | Enige ander probleme? Ons het nou vanoggend gesien, dat toe jy begin het       |
| 295 |    | met jou klas, moes die outjies uitgaan vir 'n ontbyt etc.                      |
| 296 | P8 | Ja.  |
| 297 | I  | Is hier outjies wat honger kom, wat uit moeilike omstandighede van die huis    |
| 298 |    | kom?   |
| 299 | P8 | Ja. Ons het hier by die skool, maar daar is ook kerke wat ook betrokke is, die |
| 300 | I  | wat ook 'n voedingskema gee?   |
| 301 | P8 | Ja.  |
| 302 | I  | Is dit. Dat hier kinders is wat honger is nè?                                  |
| 303 | P8 | Ja   |
| 304 | I  | Maar hier was outjies wat nie kos gehad het, kos gebring het nie. Maar dan     |
| 305 |    | maak die skool voorsiening?  |
| 306 | P8 | Ja.  |
| 307 | I  | So daar is nie regtig honger kinders   |
| 308 | P8 | Nie honger kinders nie.  |
| 309 | I  | Sê vir my, weet jy van kinders wat orphans is in jou klas, wat weeskinders is? |
| 310 | P8 | Ja.  |

|     |    |  |
|-----|----|--|
| 311 | I  | Hoeveel omtrent? Is dit nou van vigswesies? Of enige ander?                        |
| 312 | P8 | Ja. Ek het 'n enetjie Wie se vader was, sy het nog 'n mamma.                       |
| 313 | I  | Sy het nog 'n mamma, 'n meisietjie? Goed, drankmisbruik, vind jy dit baie          |
| 314 |    | hoog hier? Is hier 'n bende element ook?   |
| 315 | P8 | Ja, die kinders, jy kan sien daar is 'n probleem by die huis.                      |
| 316 | I  | Hoe identifiseer jy dit? Jy het nou gesê jy kan sien daar is 'n probleem.          |
| 317 | P8 | Die kind se maniere, hy is baie aggressief.  |
| 318 | I  | Jy sukkel met aggressiwiteit in die ...?   |
| 319 | P8 | Ja, daar's baie geweld. By die huis. Hy gaan nou-nou'n kind seermaak. Hy           |
| 320 |    | lyk, jy kan sien daar is, in homself, hy voel hy moet dit doen. So daar is         |
| 321 |    | kinders wat dit kry.   |
| 322 | I  | Hoeveel kinders is aggressief in jou klas?   |
| 323 | P8 | O, dis 'n hele paar. Ses, tien. Ek kan sê amper tien.                              |
| 324 | I  | Tien kinders wat aggressief in jou klas is, wat regtig aggressief gedrag ?         |
| 325 | P8 | Ja, en dit kom meer voor by die seuns. By die meisies ook, maar die seuns is       |
| 326 |    | baie aggressief.   |
| 327 | I  | Sal jy dit nie toeskryf dat die kinders nie dalk in 'n patroon is dat hulle dan so |
| 328 |    | aggressief raak of dat hulle verveeld raak? Want ek ...                            |
| 329 | P8 | Dit kan wees.  |
| 330 | I  | Want dis iets wat jy vir my genoem het, ek wil dit onder hierdie                   |
| 331 |    | <i>remedial/enrichment activities</i> inbring, want ons praat eintlik nou meer van |
| 332 |    | barriers wat jy ervaar. Jy ervaar in die kind self maar ook in jou klas opset.     |
| 333 | P8 | Mmm.   |
| 334 | I  | Ek wil terug na die aggressie toe, dink jy die kinders baklei omdat daar           |

|     |    |  |
|-----|----|--|
| 335 |    | byvoorbeeld toe jy die papiere uitgedeel het vir hulle om te teken, die diere na |
| 336 |    | hulle verskillende plekke toe, toe was daar nie genoegsame kryt nie.             |
| 337 | P8 | Ja.  |
| 338 | I  | Dink jy nie dat hulle aggressief raak omdat bronne baie beperk is?               |
| 339 | P8 | Bronne baie beperk is. Ja.   |
| 340 | I  | Ja, jy het nie baie bronne nie nè?   |
| 341 | P8 | Ek het nie.  |
| 342 | I  | Is dit? En die skool gee nie vir jou enige iets nie nè?                          |
| 343 | P8 | Nee.   |
| 344 | I  | So wat jy hier het is maar wat jy êrens ...?                                     |
| 345 | P8 | Wat ek maar uit my eie   |
| 346 | I  | Bymekaar gebring het?  |
| 347 | P8 | Ja.  |
| 348 | P8 | Man, ek het 'n paar skêre gehad. Maar van die kinders het dit huistoe            |
| 349 |    | geneem. Dieselfde met die kryte.   |
| 350 | I  | So, jy sit ook met die probleem dat die kinders die goeters huistoe dra ook?     |
| 351 | P8 | Ek weet nie hoe dit gebeur nie. As ek nou 'n boks uithaal, ek moet net een       |
| 352 |    | boks gebruik. Want as ek een boks uithaal, en ek sit die boks in 'n houer, dat   |
| 353 |    | dit mos mooi lyk, Ek sit dit in 'n houer sodat hulle kan sien ook, deurskynende  |
| 354 |    | houer, dan as ek netnou kyk ...  |
| 355 | I  | Dan is dit weg. Vind jy dit met ander speelgoed ook? Jou ander, blokkies?        |
| 356 | P8 | Ja, dit breek. Hulle kan nie reg daarmee speel nie, ek is te bang, ek kry nuwe,  |
| 357 |    | speelgoed, wat gaan hulle met dit. Sommer die eerste maal as dit uitkom.         |
| 358 | I  | Dan storm hulle vir dit en breek dit?  |

|     |    |   |
|-----|----|---|
| 359 | P8 | Dan storm hulle en breek alles.   |
| 360 | I  | So, jy het, vind jy dat jou kinders baie vernielsugtig is?                            |
| 361 | P8 | Baie vernielsugtig. [onduidelik]. Ek het in die begin baie puzzles, goete             |
| 362 |    | gekoop om hulle aktief besig te hou, maar ...   |
| 363 | I  | Sal jy dan sê dat jy 'n probleem of 'n leemte ervaar en dat jy hulp en leiding        |
| 364 |    | nodig het hoe om die kinders te dissiplineer, aan die eenkant?                        |
| 365 | P8 | Ja.   |
| 366 | I  | Maar ook, hoe om hulle te leer om respek te hê  |
| 367 | P8 | Vir ander mense.  |
| 368 | I  | Vir speelgoed, vir boeke. Want ek het gesien jou boeke word baie verniel.             |
| 369 | P8 | Hulle word baie verniel.  |
| 370 | I  | Verniel? Die kinders is, maar ook seker omdat jou grootte van die klas speel          |
| 371 |    | ook 'n rol, want jy is besig met een groepie, dan hardloop die ander groep rond       |
| 372 |    | nê?   |
| 373 | P8 | Ja, ja. Ek kan nie my rug draai nie. As hulle miskien so vyf in 'n groep is, 5-5, ... |
| 374 | I  | Dan kan jy hulle makliker hanteer?  |
| 375 | P8 | Ek kan dan makliker draai en sê, doen julle; ek kan een identifiseer, maar as         |
| 376 |    | hulle so groot is, dan kan ek nie hulle identifiseer nie; iemand maak 'n geluid,      |
| 377 |    | dit klink dis daar maar dan is dit nie daar nie.                                      |
| 378 | I  | So jou, jy het 'n groot leemte in jou klas opset in die opsig dat jou klas oor,       |
| 379 |    | over-crowded is? En dit kom na gedrags en dissipline probleme?                        |
| 380 | P8 | Ja.   |
| 381 | I  | Wat dit vir jou baie moeilik maak om te laat leer? En daarom fokus jy egter net       |
| 382 |    | op die sterk outjies; die ander outjies verloor jy? Want as jy heeldag aan hulle      |

|     |    |  |
|-----|----|--|
| 383 |    | moet aandag gee, gaan jy heeldag skree en raas. En dit kan jy nie doen nie?    |
| 384 | P8 | Ja.  |
| 385 | I  | Dis 'n groot probleem en 'n groot frustrasie vir jou nè?                       |
| 386 | P8 | n Groot frustrasie! Daarom dat ek daai maand wat ek siek was, het ek           |
| 387 |    | sommer 2 dae by die huis gebly.  |
| 388 | I  | By die huis gebly, toe jou stem weg was, sodat jy net 'n bietjie kan rus. Want |
| 389 |    | jy is heeltyd besig om te probeer orde skep?                                   |

## APPENDIX N

|  |
|--|
| <b>TRANSCRIPT OF SEMI-STRUCTURED INDIVIDUAL INTERVIEW:<br/>PARTICIPANT 9</b> |
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I – Interviewer; P9 - Participant 9

| Line | I/P | Transcription   |
|------|-----|---|
| 1    | I   | Juffrou J, baie dankie dat ek met jou 'n onderhoud kan voer. Het ek jou                         |
| 2    |     | toestemming om dit op band op te neem?  |
| 3    | P9  | Ja.   |
| 4    | I   | Baie dankie. Ons gaan vandag kyk, bespreek wat die groep en wat hulle, ons                      |
| 5    |     | noem dit 'n mindmap, waarby hulle uitgekome het. In die groep het hulle vir ons                 |
| 6    |     | vier temas geïdentifiseer en dit was <i>Content</i> , dit was <i>Perceptions and</i>            |
| 7    |     | <i>experiences of INSET</i> , <i>Gevoelens</i> sowel as <i>In-service training</i> wat opgekome |
| 8    |     | het. Kom ons kyk na die eerste een. Die eerste een was oor <i>Content</i> . Sê vir              |
| 9    |     | my, wat is jou gevoelens oor <i>Content</i> . Dis nou numeracy content. Wat is jou              |
| 10   |     | experiences daarmee? Jou ervaringe? Jou kennis daarvan? Wat is content vir                      |
| 11   |     | jou? Kom ek vra dit lievers vir jou so.   |
| 12   | P9  | Content is vir my die tema wat jy gaan gebruik.   |
| 13   | I   | Die tema wat jy gaan gebruik?   |
| 14   | P9  | Ja. Die inhoud van daardie tema gaan beïnvloed dit wat jy wil uitbring. Soos                    |
| 15   |     | byvoorbeeld, as jy die tema [onderbreking deur 'n kind]   |
| 16   | I   | Jy sê dis met ander woorde, die tema en die inhoud van die tema wat jy gaan                     |
| 17   |     | aanbied. Dis vir jou die content?   |
| 18   | P9  | Ja.   |
| 19   | I   | En wat se inhoud sal jy byvoorbeeld, kom ons vat nou jou tema van vandag, wat                   |
| 20   |     | was jou tema?   |
| 21   | P9  | Ja, kommunikasie. Kommunikasie. En daar het jy gefokus op die verskillende                      |
| 22   |     | maniere van kommunikasie?   |
| 23   | I   | Ja.   |
| 24   | P9  | Maar jy het getalle ingebring?  |
| 25   | I   | Ja, soos vandag met die getal wat ek ingebring het, was die getal 6. En dit is                  |
| 26   |     | verwant aan die werkvel wat ek vir die kind gegee het. Hy moet kan die getal                    |
| 27   |     | items identifiseer met die getal homself, die prentjie wat daar is met die getal                |
| 28   |     | daarvan.  |
| 29   | P9  | Die prentjie was 'n kommunikasie prentjie gewees nê?  |

|    |    |  |
|----|----|--|
| 30 | I  | Ja. Dit was  |
| 31 | P9 | Ja.  |
| 32 | I  | Goed. Kom ek vra vir jou, waar, as ons nou praat van 'n inhoud of content, waar  |
| 33 |    | kry jy dit? Afgesien nou van jou tema af? Temas is nie voorgeskryf nie. Julle    |
| 34 |    | kies self die temas nê?  |
| 35 | P9 | Ja   |
| 36 | I  | Maar hoe weet jy, soos nou, jy het gesê jy het die getal 6 ingebring, op wat     |
| 37 |    | baseer jy dit? Wat het jou laat besluit dat jy die getal 6 wil doen? Was daar 'n |
| 38 |    | riglyn gewees?   |
| 39 | P9 | My riglyne kry ek uit die werkskedule uit.                                       |
| 40 | P9 | Op my lesbeplanning.   |
| 41 | I  | Op jou lesbeplanning wat gebaseer is op jou leerprogram?                         |
| 42 | P9 | Ja. Ons begin by die leerprogram. Die learning programme nê? En                  |
| 43 |    | daarvandaan gaan jy na nou work schedule toe en van jou work schedule na jou     |
| 44 | I  | na jou lesson plan toe.  |
| 45 | P9 | Ja.  |
| 46 | I  | Maar al die inhoud wat jy in jou leerprogram en werkskedules kry, kry jy uit jou |
| 47 |    | statements nê?   |
| 48 | P9 | Ja.  |
| 49 | I  | Die National Curriculum Statements?  |
| 50 | P9 | Die National Curriculum Statements, ja.  |
| 51 | I  | En spesifiek vir Numeracy?   |
| 52 | P9 | Ja.  |
| 53 | I  | Goed. En dit gee vir jou die riglyne, die leeruitkomste en die                   |
| 54 | P9 | assesseringstandaarde.   |
| 55 | I  | Die assesseringstandaarde sê vir jou watter inhoud as jy met die kinders         |
| 56 |    | moet werk nê?  |
| 57 | P9 | Ja.  |
| 58 | I  | Maar hulle is nie baie spesifiek altyd nie nê? As ek nou byvoorbeeld noem, van   |
| 59 |    | die assesseringstandaarde, ons fokus nou net op wiskunde se                      |
| 60 |    | assesseringstandaarde, praat hulle van as ons nou by tel kom, die kind in        |
| 61 |    | Graad R moet van 1 tot 10 tel. Maar hulle praat ook van halving and doubling.    |
| 62 |    | Doen jy dit met die kinders of is dit nog te gevorderd vir jou? Hoe voel jy      |
| 63 |    | daaroor?   |
| 64 | P9 | Wel, in my werkskedule het ek voorsiening gemaak vir dit, want op 'n praktiese   |
| 65 |    | manier kan jy dit inbring. As jy byvoorbeeld, miskien lemoene vat, en baie keer  |
| 66 |    | op 'n Vrydag gee ons vrugte vir die kinders. En dit is nie altyd dat hy 'n heel  |
| 67 |    | vrug kry nie. En dan wys ek vir hulle, hierdie lemoen, omdat ons min lemoene     |

|     |    |   |
|-----|----|---|
| 68  |    | het, kan ek dit in 2 of in 4 verdeel.   |
| 70  | I  | So ek sien, jy bring daar die halving and doubling op 'n praktiese wyse in?           |
| 71  | P9 | Ja.   |
| 72  | I  | Is daar van daardie wiskunde assesseringstandaarde waaroor jy 'n bietjie              |
| 73  |    | onseker voel? Of dat jy nie altyd by almal uitkom nie?                                |
| 74  | P9 | Ek sal sê 'n assesseringstandaard, die uitkoms nommer 5, Data handling, is 'n         |
| 75  |    | bietjie moeilik omdat die kinders, as jy vir hulle sê, bring vir my iets van die huis |
| 76  |    | af, sodat ons dit kan ...   |
| 77  | I  | Op 'n grafiek sien?   |
| 78  | P9 | Ja. Dat hulle dit doen nie. So dis baie keer moeilik om daardie een te dek.           |
| 79  | I  | Ja. Measurement, voel jy jy dek hom almal met die tydsgewys in? Want ek het           |
| 80  |    | vandag gesien jy het baie sterk op jou maande gekonsentreer, en jou seisoene.         |
| 81  | P9 | Ja.   |
| 82  | I  | En jy het selfs 'n horlose uitgehaal waar jy informeel vir hulle gevra het, waar is   |
| 83  |    | die 12? Of die 6?   |
| 84  | P9 | En 7.   |
| 85  | I  | En 7 wat jy uitgewys het, of hulle die syfer kan herken en nie soseer tyd lees        |
| 86  |    | nie?  |
| 87  | P9 | Ja, 'n bietjie syferherkenning.   |
| 88  | I  | Op die horlosie. Ek sit nou net en dink aan nommer 2, leeruitkomste nommer 2          |
| 89  |    | is ook patterns.  |
| 90  | P9 | Patterns, dis die patrone,  |
| 91  | I  | wat jy gedoen het met die speelgoed, tydens jou opvoedkundige speelgoed?              |
| 92  | P9 | Ja.   |
| 93  | I  | In skeppende tyd het jy op 'n stadium daardie pennetjeborde uitgehaal dat hulle       |
| 94  |    | daarop patrone kan navolg?  |
| 95  | P9 | Sodat hulle kom kan lees en hulle tel ook, want daar is ook kleure verbonde. As       |
| 96  |    | hy sien daar is twee geles, moet hy kan tel hoeveel geles en twee geles uithaal.      |
| 97  | I  | Werk hulle daagliks met daardie prentjeborde?   |
| 98  | P9 | Ek hou daarvan, E.  |
| 99  | I  | Dit was vir my baie, ek het gesien, hulle was nie onseker nie. Hulle het geweet       |
| 100 |    | wat om te doen.   |
| 101 | P9 | Ja. Ek hou daarvan, die legkaarte en die pennetjeborde. Ek hou daarvan.               |
| 102 |    | Hulle moet dit gereeld doen.  |
| 103 | I  | Ek sien, ek sien. So, jou content sal jy ook sê, afgesien dat dit deur jou            |
| 104 |    | assesseringstandaarde en leeruitkomste in die beleidsdokumente voorgeskryf            |
| 105 |    | word, sal jy ook sê dat jou inhoud ook gerig word deur jou dagprogram? Want           |
| 106 |    | jy weet jy moet nou musiek of bewegingsaktiwiteite doen? Of storietyd? Of wat         |
| 107 |    | ookal.  |

|     |    |   |
|-----|----|---|
| 108 | P9 | My daaglikse program, ja.   |
| 109 | I  | So jou daaglikse program is basies jou raamwerk?  |
| 110 | P9 | Ja.   |
| 111 | I  | Wat jy volg maar jy bring dan die inhoud van die assesseringstandaarde                            |
| 112 | P9 | daarin, ja.   |
| 113 | I  | Okay goed. Kom ons kyk, is daar nog iets wat jy wil byvoeg?                                       |
| 114 | P9 | Nee.  |
| 115 | I  | Goed. Kom ons kyk wat die groep gesê het en dan kan jy weer vir my sê of jy                       |
| 116 |    | iets wil byvoeg. Hulle het gesê onder <i>content</i> doen hulle <i>kleure</i> , nou ek het        |
| 117 |    | gesien jy het vandag <i>kleure</i> gedoen by <i>verfwerk</i> en toe hulle die <i>pennetjies</i>   |
| 118 |    | moes uittel op die <i>pennetjies</i> borde maar ook toe hulle op die <i>mat</i> , wat is daardie? |
| 119 | P9 | Die blokkies.   |
| 120 | I  | Toe hulle die blokkies inmekaar moes gesit het nè?  |
| 121 | P9 | Ja.   |
| 122 | I  | <i>Doubling</i> het jy vir my gesê, doen jy as julle ete doen. <i>Constructing</i> het ons        |
| 123 |    | gesien by die blokke tel. <i>Nommers</i> het jy sterk op gefokus vandag en <i>counting</i> ,      |
| 124 |    | want hy gaan baie sterk, <i>sequencing</i> ?  |
| 125 | P9 | Ek sal sê <i>sequencing</i> kom ook by die <i>pennetjies</i> borde in.                            |
| 126 | I  | Van die volgorde af, dis reg, dis reg. En dan het jy ook op <i>shapes</i> baie sterk              |
| 127 |    | gedoen vandag.  |
| 128 | P9 | Ja.   |
| 129 | I  | <i>Data hantering</i> , soos jy sê, is die ou wat 'n bietjie afgeskeep word                       |
| 130 | P9 | Ja.   |
| 131 | I  | Want 'n mens het nie altyd die middele om hom te doen nie nè?                                     |
| 132 | P9 | Ja.   |
| 133 | I  | Voel jy dat jy 'n bietjie meer, sal jy graag 'n bietjie meer inligting wil hê omtrent             |
| 134 |    | data hantering? Van die departement af?   |
| 135 | P9 | Definitief.   |
| 136 | I  | En measurement ook? Want measurement gaan baie sterk met data hantering                           |
| 137 |    | nè? Data handling is 'n grafiek wat hulle optrek en measurement is ook meet.                      |
| 138 |    | So dis 'n ander manier ...  |
| 139 | P9 | Okay.   |
| 140 | I  | van meting eintlik.   |
| 141 | P9 | Wat ek by, soos lank en kort, en dan het ons weer, jy hoef nie net in, hulle moet                 |
| 142 |    | die basiese, jy kan met jou handspane meet, jy kan met jou voete gebruik om te                    |
| 143 |    | meet.   |
| 144 | I  | So jy vat dit baie meer konkreet om te meet, dat hulle hul ...                                    |
| 145 | P9 | Ja.   |
| 146 | I  | liggaampies gebruik?  |

|     |    |  |
|-----|----|--|
| 147 | P9 | Ja.  |
| 148 | I  | Goed. Okay, <i>Mathematics</i> het hulle hier genoem. Soos wat ons nou gepraat                 |
| 149 |    | het van die meting. <i>Konkrete apparaat</i> waarvan jy nou praat. <i>Patterns</i> het ons     |
| 150 |    | oor gepraat. <i>Estimation</i> ? Dis nie iets wat ek vandag eintlik gesien het uitkom          |
| 151 |    | nie?   |
| 152 | P9 | Nee.   |
| 153 | I  | Is dit iets wat jy baie gereeld maak of is dit ook iets waar jy ook 'n bietjie leiding         |
| 156 |    | nodig het?   |
| 155 | P9 | Ek sal sê, ja, skatting, wat doen ons, dit hang af wat my lys sê, E. As my lys sê,             |
| 156 |    | <i>estimation</i> , byvoorbeeld, as ek 'n bottel het met doppies in, nou sê ek vir hulle,      |
| 157 |    | skat, skat vir my hoeveel, miskien is daar 12 doppies in, dan kry ek elkeen en                 |
| 158 |    | aan die einde van die dag tel ons dit uit.   |
| 159 | I  | Om seker te maak?  |
| 160 | P9 | Ons kry, wie het reggeraai, en wie was nie reg nie. En dan bring ons                           |
| 161 |    | woordeskat in. Die groep wat reggeraai het is minder as die groep wat nie                      |
| 162 |    | reggeraai het nie.   |
| 163 | I  | Ek sien  |
| 164 | P9 | Dan bring ons daardie konsepte ook sommer in.  |
| 165 | I  | Okay. Jy hou daarvan om baie geïntegreerd te werk, kry ek die idee, nê?                        |
| 166 | P9 | Ja.  |
| 167 | I  | Hier's die <i>halvering</i> . <i>Sortering</i> het ek gesien want jy het gesê hulle moet       |
| 168 |    | volgens kleure sorteer. Goed, ons het hom nou net gedoen, van <i>more</i> , <i>less</i> ,      |
| 169 |    | <i>equal</i> . <i>Balansering</i> het ek nie soseer in jou klas gesien nie as 'n les nie, maar |
| 170 |    | ek het wel balansering gesien in die blokkespel.   |
| 171 | P9 | Ja.  |
| 172 | I  | Want toe hulle die blokke gebou het, toe val hulle inmekaar en dit het spontaan                |
| 173 |    | daar gebeur. En dan <i>versameling</i> ook. Hulle het ook gesê, hierdie <i>content is</i>      |
| 174 |    | <i>the foundation for later abstract thoughts and visualising</i> . Stem jy saam dat al        |
| 175 |    | die aktiwiteite wat jy met numeracy doen, bou op latere wiskundige denke?                      |
| 176 | P9 | Ja, dit is so.   |
| 177 | I  | En dit bevorder ook dink en <i>reason</i> ?  |
| 178 | P9 | Ja.  |
| 179 | I  | Goed, ek wil 'n bietjie oor die thinking and reasoning, Het jy dit baie ingebring              |
| 180 |    | vandag? As jy moet terug reflekteer op jou lessie vandag? Of voel jy dis ietsie                |
| 181 |    | wat jy meer kon ingebring het?   |
| 182 | P9 | Nee, ek kon dit meer ingebring het.  |
| 183 | I  | Is dit ietsie wat jy meer leiding nodig het?   |
| 184 | P9 | Ek sou nie so sê nie, E. Nie soos in die data handling nie.                                    |
| 185 | I  | Is dit, is dit? So jy moet net 'n bietjie meer sensitief daarvoor word?                        |

|     |    |  |
|-----|----|--|
| 186 | P9 | Ja.  |
| 187 | I  | En probleem oplossing ook?   |
| 188 | P9 | Ja.  |
| 189 | I  | Goed, kom ons kyk wat hulle verder gesê het. Is daar ietsie wat jy wil byvoeg                |
| 190 |    | tot wat die groep gesê het?  |
| 191 | P9 | Nee.   |
| 192 | I  | Nie? Is jy tevrede met wat hulle daar ...?   |
| 193 | P9 | Tevrede.   |
| 194 | I  | Goed. Kom ons kyk wat sê hulle onder die <i>Descriptive paragraph. Numeracy</i>              |
| 195 |    | <i>includes the acts of identifying, constructing, building, and reproducing of</i> , dan is |
| 196 |    | dit al die goeters wat ons nou genoem het,   |
| 197 | P9 | Ja.  |
| 198 | I  | <i>By the Grade R learner in concrete form in order to lay a numeracy foundation</i>         |
| 199 |    | <i>for later abstract thinking and reasoning.</i>  |
| 200 | P9 | Dit is so.   |
| 201 | I  | Dis hoekom ons sê thinking and reasoning is baie belangrik. Probleem-                        |
| 202 |    | oplossing, het jy dit êrenste ingebring vandag?  |
| 203 | P9 | Nee.   |
| 204 | I  | Is dit ietsie wat jy gereeld inbring? Of hang dit ook van jou lessie af?                     |
| 205 | P9 | Dit hang af van my les.  |
| 206 | I  | Is dit? Is dit ietsie waarin jy voel jy meer aandag, leiding sal kan gee?                    |
| 207 | P9 | Ek sal meer leiding moet kan kry in dit, probleem-oplossing.                                 |
| 208 | I  | Goed, goed. Kom ons gaan oor na, so, jy is tevrede met wat ons gesê het                      |
| 209 |    | onder <i>Content</i> nè?   |
| 210 | P9 | Ja.  |
| 211 | I  | Kom ons gaan oor na die tweede enetjie toe, en hy is, hulle het hom onder                    |
| 212 |    | <i>Enrichment and remedial activities</i> . Ons kan dit ook noem barriers to learning.       |
| 213 | P9 | Okay.  |
| 214 | I  | Wat of verrykend kan wees of remediërend. Sê vir my, is daar kinders in jou                  |
| 215 |    | klas, voor ons by hierdie ene uitkom, wag, kom ons gaan aan met hierdie ding,                |
| 216 |    | ek het vergeet om 'n inleiding met jou te doen, so, ons sal maar teen die einde              |
| 217 |    | gou 'n bietjie agtergrond omtrent jou gee, hoor.   |
| 218 | P9 | Okay.  |
| 219 | I  | Ekskuus, ek het sommer die papiere weggepak, sonder om die inleiding te                      |
| 220 |    | doen. Maar wat, het jy enige kinders in jou klas wat jy voel barriers to learning            |
| 221 |    | het? Hoeveel kinders het jy, kom ek vra jou eers hoeveel kinders het jy in jou               |
| 222 |    | klas?  |
| 223 | P9 | Ek het nou op die oomblik 25.  |
| 224 | I  | Jy het 25, hoofsaaklik isiXhosa leerders?  |

|     |    |  |
|-----|----|--|
| 225 | P9 | 'n Paar.   |
| 226 | I  | Met 'n bietjie Afrikaanse leerders. Maar ek sien, wat my baie beïndruk het, is       |
| 227 |    | hoe jy code-switching doen.  |
| 228 | P9 | Ja.  |
| 229 | I  | Jy is Afrikaans en Engels ten volle magtig en dan is jy ook Xhosa magtig,            |
| 230 |    | funksionele Xhosa magtig   |
| 231 | P9 | Ek kan hulle help.   |
| 232 | I  | Is dit? Goed, het jy enige, as ons dit nou gevra het, is daar kinders in jou klas    |
| 233 |    | wat jy al geïdentifiseer het, wat barriers to learning het? Wat probleme om te       |
| 234 |    | leer het?  |
| 235 | P9 | Daar is een meisietjie, maar ek dink dis haar agtergrond.                            |
| 236 | I  | Is dit? So dit is meer, haar agtergrond in die opsig dat daar nie stimulering is     |
| 237 |    | nie? Of vermoed jy daar is abusement?  |
| 238 | P9 | Nee, ek sal nie sê abusement nie, maar ek glo nie daar is stimulering nie. Want      |
| 239 |    | haar ouer broer het ek ook hier gehad, en hy doen nou al sy derde jaar Graad 1.      |
| 240 |    | So dis definitief is daar 'n leerprobleem. En vir haar, sy is net so stadig, die     |
| 241 |    | meisietjie.  |
| 242 | I  | Haar ouers? Wat doen hulle?  |
| 243 | P9 | Die ma werk nie. Die ma is nie getroud nie.  |
| 244 | I  | Is dit? So dit is maar swak, tragiese of hoe kan 'n mens sê, environmental           |
| 245 |    | omstandighede wat daar ...   |
| 246 | P9 | Omgewings?   |
| 247 | I  | Omgewingsomstandighede wat daar 'n rol speel. Is dit al outjie wat jy het?           |
| 248 |    | Want jy het ook vir my gesê, jy sit met 'n groep kinders in jou klas wat 'n bietjie  |
| 249 |    | jonger is as die ander outjies?  |
| 250 | P9 | Ja, maar hulle kan ek sê, hulle hou van, hulle hou by die pas van die res van die    |
| 251 |    | klas.  |
| 252 | I  | Okay, goed, doodreg. Jy wou nog gesê het? Daardie ander outjies, afgesien            |
| 253 |    | van dit?   |
| 254 | P9 | Dan, die enetjie wat van die plaas af kom, maar ek dink hy was nooit blootgestel ... |
| 255 | I  | Ook weer die omgewing?   |
| 256 | P9 | Aan ...  |
| 257 | I  | Aan 'n kleuterskool agtergrond?  |
| 258 | P9 | Ja en daarom is hy 'n bietjie stadiger as die res van die kinders.                   |
| 259 | I  | Is dit nou die eerste keer, hoe lank is hy nou by jou? Van die begin van die         |
| 260 |    | jaar?  |
| 261 | P9 | Hy het omtrent ingekom, ek dink April.   |
| 262 | I  | April? So, hy is nou omtrent so drie, ag, ses maande by jou?                         |
| 263 | P9 | Ja.  |

|     |    |   |
|-----|----|---|
| 264 | I  | Is dit? Goed, is daar enige outjies vir jou wat leerprobleme het ten opsigte dat  |
| 265 |    | hulle omruiling doen? As jy byvoorbeeld 'n 6 gemaak het, dan maak hulle 'n 9?     |
| 266 | P9 | Ja, ek het.   |
| 267 | I  | Ervaar jy dit ook?  |
| 268 | P9 | Ja.   |
| 269 | I  | Hoeveel van hulle omtrent?  |
| 270 | P9 | Ek dink daar is so twee, wat die 3 omdraai.                                       |
| 271 | I  | Ja, dis reg.  |
| 272 | P9 | En die 7 ook  |
| 273 | I  | En die 7 ook omdraai?   |
| 274 | P9 | Ja.   |
| 275 | I  | Is dit? Hoe hanteer jy dit dan?   |
| 276 | P9 | Wel, soos jy gesien het, ek gee vir hulle die playdough nè?                       |
| 277 | I  | Dis reg.  |
| 278 | P9 | Dan laat ek hulle 'n bietjie speel daarmee.                                       |
| 279 | I  | Ja.   |
| 280 | P9 | Dan wys ek vir hulle 'n kaart met die regte vorm van daardie letter, sodat hy dit |
| 281 |    | kan kyk 'n paar keer en dit doen.   |
| 282 | I  | Sodat hy dit kan maak. Ek sien, ek sien. Is daar met ...                          |
| 283 | P9 | Even, die dots, baie keer.  |
| 284 | I  | Wat hulle trace?  |
| 285 | P9 | Op die werksvel.  |
| 286 | I  | Dit trace?  |
| 287 | P9 | Ja, verskyn ook sulke aktiwiteite waar hy moet trace oor daai dots om die regte   |
| 288 |    | vorm en waar hy wys waar jy moet begin en waar jy moet omgaan en dan stop.        |
| 289 | I  | Sê vir my, werksvelle? As jy nou praat van werksvelle, vind jy nie dat die        |
| 290 |    | werksvelle te moeilik is vir jou kinders nie?                                     |
| 291 | P9 | Ek sal nie sê dat die boek wat ek gebruik te moeilik is nie.                      |
| 292 | I  | Is dit? Hoe baie gebruik jy werksvelle?   |
| 293 | P9 | Wel ek het een keer 'n week 'n werksvel wat gebaseer is op my tema. Soos          |
| 294 |    | kommunikasie, dié gaan oor tekens nè?   |
| 295 | I  | Ja.   |
| 296 | P9 | Hy moet daai tekens kan lees, wat sê daai teken?                                  |
| 297 | I  | Ja, ja. Ek sien.  |
| 298 | P9 | Want baie van hulle weet dié is 'n rolstoel en by sekere parkeer areas            |
| 299 | I  | mag hulle nie parkeer nie, ja.  |
| 300 | P9 | Want daardie teken wys spesifiek, ja.   |
| 301 | I  | Watter boek gebruik jy hierso?  |
| 302 | P9 | Die ACE ene.  |

|     |    |  |
|-----|----|--|
| 303 | I  | Dis die ACE enetjie. Goed. Daar wys hulle ook byvoorbeeld hoe om die r ...                     |
| 304 | P9 | Te maak.[wys prentjie op 42:44 van padpatroolie by voetoorgangersoorgang]                      |
| 305 | I  | Nè?  |
| 306 | P9 | Ja.  |
| 307 | I  | Goed. Ek wil terugkom na die barriers to learning. Sê vir my, voel jy dat jy                   |
| 308 |    | addisionele hulp en leiding nodig het.? Voel jy jy is heeltemal opgewasse om                   |
| 309 |    | enige barrier te kan hanteer? Of het jy nog opleiding nodig? Kyk, julle het                    |
| 310 |    | hoofsaaklik opleiding gekry, in die opleiding wat ons gegee het as die                         |
| 311 |    | departement, maar dit was miskien 'n uur of 'n twee uur opleiding. Voel jy dis                 |
| 312 |    | voldoende om al die barriers aan te ...  |
| 313 | P9 | Ek glo nie dis voldoende nie, want baie keer dan identifiseer jy 'n probleem,                  |
| 314 |    | maar jy weet eintlik nie wat om met daai probleem te doen nie. So as daar in-                  |
| 315 |    | diepte kan gegaan word.  |
| 316 | I  | So jy voel daar is 'n leemte?  |
| 317 | P9 | Ja daar is 'n leemte met die barriers to learning,   |
| 318 | I  | Soos byvoorbeeld die omruiling nè?   |
| 319 | P9 | Ja.  |
| 320 | I  | Wat veroorsaak die omruiling?  |
| 321 | P9 | Ja.  |
| 322 | I  | En hoe moet jy dit regtig ...  |
| 323 | P9 | Hanteer? Dit is so.  |
| 324 | I  | En dan ook die anderkant, die verryking, veral vir ons outjies wat ..                          |
| 325 | P9 | Vinnige outjies, ja.   |
| 326 | I  | Die vinnige outjies. Voel jy dat jy daar ook hulp en leiding nodig het?                        |
| 327 | P9 | Ek sal nie sê hulp en leiding nie, want jy gee hulle miskien net nog 'n volgende               |
| 328 |    | aktiwiteit gebaseer op daai assesseringstandaarde waarop jy fokus.                             |
| 329 | I  | Okay, jy voel jy is gemaklik om hulle te hanteer?  |
| 330 | P9 | Ja.  |
| 331 | I  | Het jy enige outjies wat begaafd is in jou klas?   |
| 332 | P9 | Nie soseer nie. Ek sal sê hulle is almal min of meer op dieselfde vlak.                        |
| 333 | I  | Okay, goed. Kom ons kyk wat die groep gesê het. Ons het gesê onder                             |
| 334 |    | <i>remedial en verrykende aktiwiteite</i> kan jy gebruik maak van <i>rympies</i> .             |
| 335 | P9 | Ja.  |
| 336 | I  | Van <i>kreatiewe aktiwiteite</i> , hierdie was byvoorbeeld 'n tema gewees <i>shopping</i> ,    |
| 337 |    | dan die <i>gediggies</i> , <i>ryg</i> het hulle baie sterk ingebring en dan <i>dominoes</i> en |
| 338 |    | <i>beweging</i> wat jy baie sterk ingebring het vandag. Weereens die <i>integrasië</i> wat     |
| 339 |    | baie belangrik is en dan ...   |
| 340 | P9 | <i>Natuurtafels</i> .  |
| 341 | I  | En <i>walks</i> kan jy gebruik om verrykend te wees.   |

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| 342 | P9 | Ja.  |
| 343 | I  | En dan <i>tekeninge</i> ook. En dan <i>liedjies, speletjies</i> , dan weer <i>blokbou</i> en   |
| 344 |    | <i>puzzles</i> . Alls help en dan <i>number</i> en <i>everyday living</i> waar jy die horlosie |
| 345 |    | ingebring het nè? Is daar ietsie wat jy daarby wil byvoeg?                                     |
| 346 | P9 | Nee.   |
| 347 | I  | Kom ons gaan na die <i>Beskrywende paragrafie. Enrichment and remedial</i>                     |
| 348 |    | <i>activities could include</i> dan al daardie ...   |
| 349 | P9 | Ja.  |
| 350 | I  | en dan sê hulle, <i>in order to ensure that learners are internalising concretely</i>          |
| 351 |    | <i>numeracy concepts and experience it as everyday life's activities.</i>                      |
| 352 | P9 | Ek stem heeltemal saam want met jou songs en jou poems, jou rhymes bring jy                    |
| 353 |    | dit ....   |
| 354 | I  | Jy lê dit vas?   |
| 355 | P9 | Jy lê dit vas.   |
| 356 | I  | Jy lê dit vas daarmee nè want ek ...   |
| 357 | P9 | Want voor die storie het ek telrympies weer gedoen.  |
| 358 | I  | Want vroeër in die oggend het jy tel gedoen?   |
| 359 | P9 | Ja.  |
| 360 | I  | Goed die derde ene is <i>Perceptions and experiences of Inset</i> . Onthou jy ons het          |
| 361 |    | gevra, na aanleiding van hierdie statement <i>Tell me about your experiences of</i>            |
| 362 |    | <i>attending numeracy in-service training by the District Office</i> het die groep             |
| 363 |    | <i>Perceptions and experiences of Inset</i> geïdentifiseer as 'n tema. Vertel my, wat          |
| 364 |    | is jou gevoelens omtrent enige opleiding wat jy ontvang het? Ek wil eers begin,                |
| 365 |    | kom ons begin heel eerste by jou eerste opleiding. Jy is eers gekwalifiseerd as                |
| 366 |    | 'n junior primêre onderwyseres nè?   |
| 367 | P9 | Ja.  |
| 368 | I  | Hoe lank hou jy al skool? Kom ek kry 'n bietjie agtergrond.                                    |
| 369 | P9 | Ek het in 1974 begin.  |
| 370 | I  | In 1974, so dis amper 34 jaar?   |
| 371 | P9 | Ja. Maar toe het ek, 1993, toe is dit mos daai retrenchments wat ingekom het,                  |
| 372 | I  | Ja.  |
| 373 | P9 | En toe was dit 'n geval van First in ...   |
| 374 | I  | Last in.   |
| 375 | P9 | Last in, first out.  |
| 376 | I  | En toe moes jy uitgaan?  |
| 377 | P9 | Nee. Ek het, want daar was jonger mense as ek en omdat ek 'n bors probleem                     |
| 378 |    | het.   |
| 379 | I  | Okay.  |
| 380 | P9 | Het ek, en ek was ook nie destyds, die weer het ook nie met my geakkordeer                     |

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| 381 |    | nie, toe het ek gevulenteer om te gaan.   |
| 382 | I  | En toe het jy begin met kleuterskool nè?  |
| 383 | P9 | Ek het onmiddellik ...  |
| 384 | I  | In 1993?  |
| 385 | P9 | In 1994.  |
| 386 | I  | So jy is nou al 14 jaar besig met Graad R?  |
| 387 | P9 | Mmm.  |
| 388 | I  | Goed, kom ons kyk na jou eerste kwalifikasies, as junior primêre onderwyseres.      |
| 389 |    | Watter graad het jy daar gedoen?  |
| 390 | P9 | Toe ek begin het as onderwyseres, toe het ek begin met Graad 2                      |
| 391 | I  | Graad 2.  |
| 392 | P9 | En Nie Graad 2 nie, standerd 2. Dis graad 4 en graad 5.                             |
| 393 | I  | So, jy was eintlik meer senior primêr gewees?                                       |
| 394 | P9 | Ja maar ek het 10 jaar in die senior deurgebring en toe, na 10 jaar, toe kry ek 'n  |
| 395 |    | graad 1 klas.   |
| 396 | I  | Graad 1 klas.   |
| 397 | P9 | Ek dink dit was ook omtrent 10 jaar gewees.   |
| 398 | I  | Ook 10 jaar? Is dit? Waar het jy jou opleiding gekry? Waar was jy?                  |
| 399 | P9 | By Darver opleiding gewees.   |
| 400 | I  | Ek sien. Toe gaan jy oor na kleuterskool opleiding en jy begin die kleuterskool     |
| 401 |    | hierso in die township nè?  |
| 402 | P9 | Ja.   |
| 403 | I  | Het jy toe enige opleiding gehad in kleuterskool?                                   |
| 404 | P9 | Nee. Toe het ek Rhodes toe gegaan.  |
| 405 | I  | Na CSD toe?   |
| 406 | P9 | CSD, Centre for Social Development.   |
| 407 | I  | Okay.   |
| 408 | P9 | En daar het ons die verskillende vlakke, levels ...                                 |
| 409 | I  | Gedoen by ...?  |
| 410 | P9 | Ja, hulle het level 1, level 2 en level 4. En toe, na dit, toe doen ons pre-primêr, |
| 411 |    | deur die fakulteit by Rhodes. So, ek het daai sertifikaat ook.                      |
| 412 | I  | So jy het die sertifikaat ook. Is dit die ACE, dis nie die ACE nie, is dit die ...  |
| 413 | P9 | Nee. Dit was net pre-primêr.  |
| 414 | I  | Is dit? Watter jaar was dit gewees? 2003? 2004?                                     |
| 415 | P9 | Voor dit.   |
| 416 | I  | Voor dit? Is dit? Bied hulle dit nog aan, die pre-primêre diploma?                  |
| 417 | P9 | Ek glo nie.   |
| 418 | I  | Want ek wou sê, ek weet hulle is weg, want dis hoekom dit vir my vreemd was.        |

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| 419 | P9 | Want toe het hulle die NPDE ingebring, na dit.                                   |
| 420 | I  | Dis reg, want dis hoekom [onduidelik]. En toe jy by hulle klaar is?              |
| 421 | P9 | Toe kry ek die opleiding van SANTS, deur die onderwys departement, die level     |
| 422 |    | 4.   |
| 423 | I  | Die level 4 SANTS ene nè?  |
| 424 | P9 | Ja.  |
| 425 | I  | Waar jy dan 'n community-based onderwyseres is, wat nie salaris nie, maar 'n     |
| 426 | P9 | subsidie van die ...   |
| 427 | I  | 'n Subsidie gekry en hulle het vir jou opleiding gegee. Hoe lank was die         |
| 428 |    | opleiding toe nou?   |
| 429 | P9 | Twee jaar.   |
| 430 | I  | Twee jaar nè? En hulle het ook vir jou speelgoed gegee? Nee? Het jy 'n           |
| 431 |    | speelgoedkas gekry?  |
| 432 | P9 | By die departement.  |
| 433 | P9 | Ja.  |
| 434 | I  | Okay. Goed. En nou, op hierdie stadium, kry jy nog enige opleiding by hulle?     |
| 435 | I  | By die department?   |
| 436 | P9 | Ja.  |
| 437 | I  | Ja.  |
| 438 | I  | Dis maar meer die gewone INSET.  |
| 439 | P9 | Ja, die INSET.   |
| 440 | I  | Die INSET wat hom meer op die NCS, die nuwe kurrikulum fokus nè?                 |
| 441 | P9 | Ja.  |
| 442 | I  | Goed. As jy kyk na die nuwe kurrikulum se training, hoe het jy dit ervaar?       |
| 443 | P9 | Ek sal sê die training is baie goed E. Maar dis 'n bietjie baie gejaagd          |
| 444 | I  | Dis baie gejaagd. Jy is ook een van die persone wat opgelei is as 'n opleier vir |
| 445 |    | 'n groep nè?   |
| 446 | P9 | Ja. want soos die evaluasie wat ons nou weer gedoen het, toe sê ek, die          |
| 447 |    | departement moet meer tyd gee. Dit baat nie ons kry 'n opleiding en dit in 'n    |
| 448 |    | gejaagde wyse plaasvind nie. Dit sink nie alles by jou in nie.                   |
| 449 | I  | So jy kry nie kans om dit te internaliseer nie?                                  |
| 450 | P9 | Ja.  |
| 451 | I  | En regtig daarmee te wroeg en te worstel en te sê, is dit wat hulle nou daarby   |
| 452 |    | bedoel?  |
| 453 | P9 | Ja. Hulle moet baie meer tyd gee. Kyk ons sessie van die naweek, ek voel dit     |
| 454 |    | was baie gejaagd.  |
| 455 | I  | Ja, ja. En dit was 'n baie belangrike sessie.                                    |
| 456 | P9 | Ja. Daar moet meer tyd gespandeer word sodat ons, selfs met die                  |
| 457 |    | onderwysers, want daai paar ure wat ons kry, van een uur tot watter tyd toe?     |

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| 458 | I  | Vier uur, ja.  |
| 459 | P9 | Dis nie genoeg nie.  |
| 460 | I  | Ja, ja. So jy voel eintlik, ons is meer basies om 'n overview te gee as om in-       |
| 461 |    | diepte in te gaan? Voel julle nie al 'n bietjie moeg nie? Kyk, want ek het in 2005   |
| 462 |    | gekom en toe het julle alreeds opleidings sessies gehad. Dis nou nog voor die        |
| 463 |    | ECD se opleidings sessies.   |
| 464 | P9 | Ja.  |
| 465 | I  | Voel julle nie al moeg vir opleiding nie? Voel julle daar is nog 'n behoefte aan     |
| 466 |    | meer en meer in detail?  |
| 467 | P9 | Ek sal nie sê ek is moeg vir opleiding nie, want 'n mens leer elke dag 'n bietjie    |
| 468 |    | meer. So, die opleiding wat ons kry, sal ek sê, as ons nog moet kry... Baie keer     |
| 469 |    | vergeet 'n mens dinge, en dan met 'n opleiding ...                                   |
| 470 | I  | Dan skerp dit jou weer op?   |
| 471 | P9 | Ja.  |
| 472 | I  | Skerp dit jou weer op. Is dit? Goed. Sal ons kyk na wat sê die mense oor die         |
| 473 |    | indiensopleiding? Party het gesê: <i>Looking for more stimulation, sometimes</i>     |
| 474 |    | <i>scared, unsure about content and methodology of INSET workshop.</i> Ouens wat     |
| 475 |    | in die begin gekom het vir die eerste keer vir die werkswinkels, was 'n bietjie      |
| 476 |    | bang gewees. Het jy ook soos gevoel in die begin? Of nie eintlik nie?                |
| 477 | P9 | Ja, 'n mens voel onseker.  |
| 478 | I  | Aan die begin?   |
| 479 | P9 | Aan die begin.   |
| 480 | I  | Tot jy sien wat gebeur?  |
| 481 | P9 | Ja.  |
| 482 | I  | Goed. <i>Was not limited, previous numeracy INSET was suited for under-</i>          |
| 483 |    | <i>privileged only.</i> Hier het 'n persoon so gesê, sy het gevoel dis ouens wat nie |
| 484 |    | ten volle opgelei is nie. Sy het gevoel dat die opleiding was meer op daardie        |
| 485 |    | vlak gewees as op haar vlak. Sy wil eintlik meer, lyk my, 'n enrichment gehad        |
| 486 |    | het.   |
| 487 | P9 | Ja.  |
| 488 | I  | En nie 'n remedial nie.  |
| 489 | P9 | Okay.  |
| 490 | I  | Voel jy ook partykeer dat ons goed vir julle aanbied wat nie regtig gepas is nie?    |
| 491 | P9 | Ek sal nie so sê nie, E.   |
| 492 | I  | Jy voel dit is op die regte vlak? Goed. <i>Very basic!</i> Gaan weer aan met daardie |
| 493 |    | een wat gevoel he ... <i>Need to know more about numeracy.</i> Voel jy ook dat jy    |
| 494 |    | nog meer numeracy opleiding nodig het? In-diepte?                                    |
| 495 | P9 | Nee, ek sal nie so sê nie, E.  |
| 496 | I  | Behalwe met data hantering?  |

|     |    |   |
|-----|----|---|
| 497 | P9 | Ja, met data hantering  |
| 498 | I  | Met data hantering, goed. <i>Waste of time</i> . Verskil jy daar?                           |
| 499 | P9 | Nee, ek verskil daarso.   |
| 500 | I  | Party het gevoel hulle is gemotiveerd.  |
| 501 | P9 | Ja.   |
| 502 | I  | Stem jy saam daarmee?   |
| 503 | P9 | Ja.   |
| 504 | I  | Party het gevoel die opleiding is baie vaag. Dis net 'n overview; dis nie in-               |
| 505 |    | diepte genoeg nie.  |
| 506 | P9 | Dis waarom ek sê E, as dit gejaagd is, dan voel 'n mens als is vaag vir jou.                |
| 507 |    | Maar as jy in-diepte ingaan, meer tyd het.  |
| 508 | I  | Dit gaan terug om tyd?  |
| 509 | P9 | Ja.   |
| 510 | I  | Gaan oor tyd nê? <i>Sometimes excited</i> maak mens opgewonde, <i>to be open</i>            |
| 511 |    | <i>mind</i> , as jy na die werkswinkels toe kom moet jy nie met 'n ...                      |
| 512 | P9 | Negatiewe houding   |
| 513 | I  | Houding, dis wat daar neerkom. Jy is nie alleen nie.  |
| 514 | P9 | Nee, definitief. Want as ons almal as 'n groep die opleiding het en ek voel ek              |
| 515 |    | het iets nie verstaan nie, dan kan ek gaan na iemand anders toe.                            |
| 516 | I  | Ek kan miskien gaan vra hoe sien jy dit?  |
| 517 | P9 | So 'n bietjie die peer training en leer wat daar inkom nê                                   |
| 518 | I  | Goed. <i>Worth it</i> het iemand gesê. Het gesê dis relevant, <i>very keen to attend</i> en |
| 519 |    | dit was <i>beneficial</i> gewees. Okay, iets wat jy daarby wil voeg?                        |
| 520 | P9 | Nee.  |
| 521 | I  | Nie? Kom ons kyk na die beskrywende paragrafie. <i>Perceptions and</i>                      |
| 523 |    | <i>experiences of in-service training include</i> al hierdie goeters wat ons nou net        |
| 524 |    | genome het. <i>Thus it is being experienced positively and negatively</i> . Toe ons         |
| 525 |    | na hierdie klompie gekyk het, het ons gesien dat daar positiewes en                         |
| 526 |    | neagatiewes is.   |
| 527 | P9 | Ja.   |
| 528 | I  | <i>Teachers want to attend inset because of being motivated</i>                             |
| 529 | P9 | Ja.   |
| 530 | I  | <i>To improve their teaching strategies and to know more as well as to share and</i>        |
| 531 |    | <i>learn</i> . Dis wat jy vir my gesê het. <i>Within other words to collegiate with one</i> |
| 532 |    | <i>another</i> . Soos toe jy gesê het, as jy nie seker is nie, kan jy ...                   |
| 533 | P9 | Iemand vra.   |
| 534 | I  | Jy stem saam?   |
| 535 | P9 | Ek stem volkome saam.   |
| 536 | I  | Sê vir my, hoe het jy, is dit die SANTS opleiding wat jy gedoen het, hoe het jy             |

|     |    |   |
|-----|----|---|
| 537 |    | dit ervaar?   |
| 538 | P9 | Vir my was SANTS se opleiding eintlik nie die moeite werd nie, omdat ...          |
| 539 | I  | Dit was nou vir die vlak, level 4 nè?   |
| 540 | P9 | Vir level 4.  |
| 541 | I  | Wat jy vir 2 jaar gedoen het?   |
| 542 | P9 | Ja.   |
| 543 | I  | Waar het julle dit gekry? Moes julle Grahamstad toe gegaan het?                   |
| 544 | P9 | Ons moes Grahamstad toe ry.   |
| 545 | I  | Okay. Goed. Hoeveel keer het dit plaasgevind? Ekskuus dat ek jou in die rede      |
| 546 |    | val, ek gaan nou ...  |
| 547 | P9 | Ons het ...   |
| 548 | I  | Een keer 'n maand?  |
| 549 | P9 | Nee dit was op Saterdag.  |
| 550 | I  | Saterdag?   |
| 551 | P9 | Sekere Saterdag in 'n maand en dan het ons week sessies ook gehad in die          |
| 552 |    | vakansies.  |
| 553 | I  | Okay, goed. Wat wou jy gesê het van hulle?  |
| 554 | P9 | Nee, ek het gesê, ons het begin met die RNCS, en toe het ons opleiding in dit     |
| 555 |    | gekry.  |
| 556 | I  | Ja.   |
| 557 | P9 | Terselfdertyd toe kom die ding van die Level 4 in van die department waar hulle   |
| 558 |    | SANTS as 'n ...   |
| 559 | I  | Service provider?   |
| 560 | P9 | As 'n service provider gekry het. En daar het ek vreeslik verskil omdat die       |
| 561 |    | fasiliteerders wat SANTS gestuur het ...  |
| 562 | I  | Ja.   |
| 563 | P9 | Die boeke wat hulle gebring het, dit was nie relevant vir my aan die RNCS nie.    |
| 564 | I  | Is dit?   |
| 565 | P9 | Omdat hulle nog van die ou methodology van ...?                                   |
| 566 | I  | Kurrikulum 2005 gepraat het?  |
| 567 | P9 | Ja.   |
| 568 | I  | So hulle het nog van program organiseerders en wat was die ander goeters          |
| 569 |    | gewees?   |
| 570 | P9 | Phase organizers en al daai.  |
| 571 | I  | O sjoe, dit moes jou baie deurmekaar gemaak het?                                  |
| 572 | P9 | Ja. En ons het vir die fasiliteerders dit gesê, want die groep waarin ek was, ons |
| 573 |    | almal het met die RNCS begin.   |
| 574 | I  | Dis reg.  |
| 575 | P9 | Toe sê ons dis nou verwarrend, hulle verwar ons nou, want hulle boeke sê dit,     |

|     |    |  |
|-----|----|--|
| 576 |    | maar die department het vir ons hierdie opleiding gegee. En hulle kon nie vir      |
| 577 |    | ons duidelikheid gee nie. Ons het maar ons eie goed aangepas, die ...              |
| 578 | I  | So, julle het eintlik vir hulle opleiding gegee? Want hulle was nie hands-on nie?  |
| 579 | P9 | Die boeke is almal gegrond op Kurrikulum 2005.                                     |
| 580 | I  | Maar dit was 'n groot fout gewees. Want toe Kurrikulum 2005 inkom, het hulle       |
| 581 |    | opleiding, moes die service providers, moes hulle programme                        |
| 582 |    | dienooreenkomstig, aangepas word. En hulle het nie. By die nuwe NCS wat            |
| 583 |    | ingekom het. Goed. En sê vir my, die opleiding, kyk, julle het nou dit gekry om    |
| 584 |    | 'n sertifikaat te kry vir 'n level 4 nè? Al was jy 'n gekwalifiseerde onderwyseres |
| 585 |    | moes jy ...  |
| 586 | P9 | Het ek dit gekry.  |
| 587 | I  | Die ander ene is, wat julle daarna gekry het, is die ECD opleiding van die         |
| 588 |    | distrikkantoor van L, meer spesifiek, oor Module 1,2 en 3 van KZN se               |
| 589 |    | department. Hoe het jy dit gevind?   |
| 590 | P9 | Nee, ek hou vreeslik van dit.  |
| 591 | I  | Is dit?  |
| 592 | P9 | Want hy is, hy is basies, hy sê vir jou presies. Ek volg selfs hulle daaglikse     |
| 593 |    | program  |
| 594 | I  | Ja.  |
| 595 | P9 | Hulle lesbeplanning en hulle het voorbeelde van elke ding vir ons gegee.           |
| 596 | I  | Goed, jy praat nou van lesbeplanning en beplanning? Vind jy dit nie geweldig       |
| 597 |    | baie nie? Hoe is jou gevoelens? Is jy op datum? Kom ek vra eers so, is jy op       |
| 598 |    | datum met al jou lesse en beplanning?  |
| 599 | P9 | My werkskedules is op datum.   |
| 600 | I  | Dis nou wat jy vir elke termyn doen nè?  |
| 601 | P9 | Ja, per kwartaal.  |
| 602 | I  | Per kwartaal.  |
| 603 | P9 | Die lesbeplanning kry jy mos nou van jou werkskedules en ons werk in temas.        |
| 604 | I  | Ja.  |
| 605 | P9 | So die lesbeplanning is eintlik, ons beplan, ek beplan my lesse vir 'n week.       |
| 606 | I  | Vir 'n week?   |
| 607 | P9 | Dis 'n ...   |
| 608 | I  | Weeklikse siklus?  |
| 609 | P9 | Tien dae siklus.   |
| 610 | I  | Twee weekliks?   |
| 611 | P9 | Twee weekliks.   |
| 612 | I  | Twee weeklikse siklus. Ja.   |
| 613 | P9 | So 'n tema gaan oor twee weke by my. Dit werk vir my baie goed want jy het         |
| 614 |    | jou, klasbesprekings waarop jy hom uitwerk, vir jou bespreking, vir jou musiek,    |

|     |    |  |
|-----|----|--|
| 615 |    | vir jou beweging, vir jou drama, vir jou storie. En daarop sit jy hom uiteen vir jou |
| 616 |    | tien dae siklus. Met al jou leer, hoe sê mens vir dit? Leerooreenkomste nê?          |
| 617 | I  | Leeruitkomste.   |
| 618 | P9 | Learning outcomes en die assessment standards.                                       |
| 619 | I  | Okay, so jy integreer baie op die dagprogram?  |
| 620 | P9 | Ja.  |
| 621 | I  | En jy het gevind hulle opleiding was vir jou heeltemal hands on en wat jy nodig      |
| 622 |    | gehad het?   |
| 623 | P9 | Ja.  |
| 624 | I  | Jy kan jou klas daarmee hanteer?   |
| 625 | P9 | Ja.  |
| 626 | P9 | As ek dit moet vergelyk met SANT se opleiding.                                       |
| 627 | I  | So SANTS was nie vir jou die moeite werd gewees nie?                                 |
| 628 | P9 | Nee.   |
| 629 | I  | Goed. Enige iets anders oor die opleiding wat jy nog wil sê? Jou beplanning?         |
| 630 |    | Jy sê, jy is besig om jou lesse uit te werk?   |
| 631 | P9 | Ja.  |
| 632 | I  | Assessering? Goed, jy het nou net weer 'n opleiding gekry?                           |
| 633 | P9 | Ja.  |
| 634 | I  | Vind jy dat dit 'n leemte gewees het?  |
| 635 | P9 | DI't was 'n leemte. En ek het baie meer duidelikheid gekry, veral met die            |
| 636 |    | formele assesseringstake wat ons nou moet implementeer. Daar is baie meer            |
| 637 |    | duidelikheid vir my oor wat gedoen moet word. Die, is dit nou die literacy?          |
| 638 | I  | Ja?  |
| 639 | P9 | Dit is gedek. Ons het die handleidings, die guidelines gekry. Maar die leemtes       |
| 640 |    | is nog numeracy en die life skills. So, ons moet maar onse eie                       |
| 641 | I  | koppe volg, idees volg?  |
| 642 | P9 | Ja.  |
| 643 | I  | Totdat julle daardie ook kry.  |
| 644 | P9 | Wat ek gedink het nê? Aangesien daar ander document uit is vir Graad 1 tot 3,        |
| 645 |    | wat literacy en numeracy dek, kan ons net 'n riglyn kry, van die Graad 1 af,         |
| 646 |    | want ons tel net tot by 10.  |
| 647 | I  | EK het ook nogal daaraan gedink.   |
| 648 | P9 | En soos life skills waar daar ook nog nie, daar is net vier.                         |
| 649 | I  | Leeruitkomste?   |
| 650 | P9 | Ja, vir life skills.   |
| 651 | I  | Dis reg.   |
| 652 | P9 | Ek weet nie, moet 'n mens al 4 vir een   |
| 653 | I  | kwartaal doen?   |

|     |    |   |
|-----|----|---|
| 654 | P9 | Ja, of kan jy een outcome vir 'n assesseringstaak vat?                                    |
| 655 | I  | Weet jy?  |
| 656 | P9 | En hom integreer?   |
| 657 | I  | As, ek wil sê jy sal moet integrering inbring, want movement is ...                       |
| 658 | P9 | Jy kan nie net, is baie ...   |
| 659 | I  | Dis LO 4 en volgens jou dagprogram moet jy ten minste twee keer per week                  |
| 660 |    | movement doen want dit is in die kind se ontwikkelingstadium belangrik, hy                |
| 661 |    | moet beweeg.  |
| 662 | P9 | So, jy kan nie fokus op ...?  |
| 663 | I  | Net een leeruitkomste nie, nee.   |
| 664 | I  | Nee, jy sal moet integrering inbring. Ek is baie seker daarvan, regtig.                   |
| 665 | P9 | Want dis nog iets wat my 'n bietjie pla, hoe gaan ons hom aanpak?                         |
| 666 | I  | Ja, jy sal hom moet integreer. Party van hulle sal jy op 'n kwartaal kan doen.            |
| 667 |    | Ek sit nou en dink aan leeruitkomste, ek is nie nou seker waar, die leeruitkomste         |
| 668 |    | oor safety, waar die kinders se, die HIV/AIDS week. Nou daardie ene kan jy                |
| 669 |    | aan die einde van die jaar doen as dit HIV/AIDS week is nê? Maar hy kan ook               |
| 670 |    | geïntegreer word, as jy die tema Hospitaal doen of die Kliniek doen. So dit               |
| 671 |    | hang af.  |
| 672 | P9 | Die mense wat ons help, the people who help us, ons het hom daar in gedoen.               |
| 673 | I  | Dis reg. Dit hang af waar. Ek persoonlik dink jy kan hom meer as een keer                 |
| 674 |    | integreer in 'n sekere ding in. Goed, kom ons gaan oor na die volgende enetjie            |
| 675 |    | toe. Dit was <i>Gevoelens</i> en daar het hulle nogal onderskei tussen <i>Onderwysers</i> |
| 676 |    | <i>gevoelens en Learners' feeldings</i> . Sê vir my, wat is jou gevoelens, as ek sê       |
| 677 |    | numeracy? Wat beleef jy? Hoe beleef jy dit? Wat is jou gevoelens? Is jy                   |
| 678 |    | negatief teenoor, om wiskunde te implementeer? Is jy bang?                                |
| 679 | P9 | Nee. Ek hou eintlik baie van wiskunde. Ek hou daarvan dat die kinders moet                |
| 680 |    | tel, hulle moet telrympies kan opsê, hulle moet selfs wanneer hulle besig is, ek          |
| 681 |    | weet nie of jy opgelet het nie, K moes vir my die lepels uitdeel?                         |
| 682 | I  | Dis reg, ja.  |
| 683 | P9 | En hy moet tel hoeveel is by 'n tafel, sodat hy weet hy moet nie net 'n bondel            |
| 684 |    | gryp en gaan neersit nie. Hy moet kan tel. Ek hou baie van numeracy.                      |
| 685 | I  | Okay, goed. Sal jy sê, in jou numeracy fokus jy meer op tel as enige iets                 |
| 686 |    | anderste?   |
| 687 | P9 | Nee. Daar is 'n tyd wat jy, 'n sekere persentasie   |
| 688 | I  | Ja.   |
| 689 | P9 | Hy is baie belangrik. LO 1.   |
| 690 | I  | Maar jy fokus nie net op hom nie?   |
| 691 | P9 | Nie net op hom nie. Die ander moet ook hulle  |
| 692 | I  | Kom jy op 'n stadium waarhy begin te, jy het nou vir hom gesê, as ons na                  |

|     |    |   |
|-----|----|---|
| 693 |    | vandag as voorbeeld kyk, hy moet nou 3 lepels uittel, kom jy op 'n stadium waar             |
| 694 |    | jy vir hom sê, wat gebeur as jy no genetjie bytel? Of as jy een te min het? Die             |
| 695 |    | bietjie optel en aftrek? Begin jy al dit doen met die kinders?                              |
| 696 | P9 | Dis my volgende les na vandag se les.   |
| 697 | I  | Is dit?   |
| 698 | P9 | Dis my volgende les. Hulle moet dit doen, want die, daai ding skryf dit voor.               |
| 699 | I  | Dat jy kan optel en aftrek?   |
| 700 | P9 | Dat jy kan optel en aftrek.   |
| 701 | I  | En wat dit beteken. Goed. Jy sê jy voel baie positief oor wiskunde en die                   |
| 702 |    | implementering daarvan?   |
| 703 | P9 | Ja.   |
| 704 | I  | Hoe dink jy beleef die kinders dit? Wat is jou gevoel van die kinders? Hoe voel             |
| 705 |    | hulle oor wiskunde? Oor numeracy, eintlik meer, dis meer numeracy waarvan                   |
| 706 |    | ons praat?  |
| 707 | P9 | Ek sal sê hulle hou ook baie van... Ek weet nie, is dit omdat ek ...                        |
| 708 | I  | Dit aanbied?  |
| 709 | P9 | Ja, ja. Maar jy sal hulle oneindig hoor tel, soos jy gesê het, buite, begin hulle tel       |
| 710 |    | hoeveel boontjiesakke het hulle ingegooi.   |
| 711 | I  | Ja.   |
| 712 | P9 | Hulle is ook baie positief. Selfs kleure, as ons hulle laat gaan dan sê ons, almal          |
| 713 |    | wat rooi aan het vandag, julle gaan sit nou. So bring ons dit in en ons integreer           |
| 714 |    | dit in alles wat ons ...  |
| 715 | I  | So jy voel hulle is ook positief? Hulle is nie bang om met wiskundige konsepte              |
| 716 |    | te werk nie?  |
| 717 | P9 | Nee.  |
| 718 | I  | Goed, kom ons kyk wat die groep gesê het. Die groep het gesê by die juffrou,                |
| 719 |    | sy moet gelukkig wees en positief daarvoor voel. <i>Encouraging</i> , sy moet kinders       |
| 720 |    | kan aanmoedig, sy moet gemaklik wees. <i>Life</i> - lewendig nè? En dit is <i>fun</i> – dit |
| 721 |    | moet prêet wees. Jy moet kan wag en kan deel. Sy sê wel <i>language barriers</i>            |
| 722 |    | speel 'n rol in wiskunde. Het jy dit ervaar?  |
| 723 | P9 | Dit is so, veral waar die kind nou nie jou taal magtig is nie. Dit is 'n barrier,           |
| 724 |    | definitief. Maar, soos jy sien, ek slaan oor  |
| 725 | I  | Ja jy doen code-switching. Ek het dit baie duidelik gesien. Jy adapt                        |
| 726 |    | onmiddelik.   |
| 727 | P9 | Ja,   |
| 728 | I  | En jy maak daai vas in sy moedertaal voor jy hom weer terugbring.                           |
| 729 | P9 | Ja.   |
| 730 | I  | Dit was vir my baie goed gewees. Dan moet sy opgewonde wees en sy moet                      |
| 731 |    | verstaan en sy moet ook <i>challenges</i> inbring. Goed, die kinders het hulle ook          |

|     |    |  |
|-----|----|--|
| 732 |    | baie sterk gevoel, moet gelukkig wees, moet aangemoedig word, daar moet ook                            |
| 733 |    | prêt wees, daar moet lag wees, hulle moet <i>confident</i> wees nè?                                    |
| 734 | P9 | Ja.  |
| 735 | I  | En daar moet <i>fun</i> wees. Ook <i>exciting</i> , <i>excited</i> en hy moet <i>gechallenge</i> word. |
| 736 |    | <i>Insecure and no prior knowledge...</i> Jy het nou genoeg van die outjie wat                         |
| 737 |    | [onduidelik] is  |
| 738 | P9 | Ja.  |
| 739 | I  | Hy voel <i>insecure</i> want daar is geen prior knowledge, hy is milieu gestremd.                      |
| 740 | P9 | En die huisomgewing, speel 'n baie belangrike rol.   |
| 741 | I  | Ons sê ook die juffrou moet <i>helpful</i> wees, <i>confident</i> en <i>enjoyment</i> hê, in die       |
| 742 |    | hele storie. Ek wil weer kom, daar na die <i>challenge</i> toe, <i>challenge</i> gaan vir my           |
| 743 |    | saam met problem-oplossing, gaan vir my daarvoor dat jy 'n kind blootstel aan                          |
| 744 |    | ontdekking, eksplorاسie en dan vir hom 'n probleem gee en dan moet hy                                  |
| 745 |    | voorspel hoe hy dit gaan oplos. In vandag se aktiwiteite, was daar enige iets                          |
| 746 |    | daarvan wat voorgekom het? Of nie so sterk vandag nie?   |
| 747 | P9 | Nie so sterk vandag nie.   |
| 748 | I  | Nie so sterk vandag nie. Okay, goed. Sal jy sê dis 'n leemte in die algemeen?                          |
| 749 |    | Dat jy 'n bietjie meer aandag moet gee?  |
| 750 | I  | Ja? Ook 'n bietjie meer leiding daaromtrent nodig?   |
| 751 | P9 | Ja.  |
| 752 | I  | Goed. Die <i>Descriptive</i> paragrafie: <i>Feelings that are experienced by teachers</i>              |
| 753 |    | <i>are</i> en dan is dit die groep wat ons nou genoem het. <i>It is important that</i>                 |
| 754 |    | <i>learners are challenged for learning to take place, even though the learner</i>                     |
| 755 |    | <i>might feel insecure due to no prior numeracy knowledge.</i> Wat ons daar probeer                    |
| 756 |    | sê het is, ons moet 'n kind vat waar hy is, ons moet weet wat sy kennis is, en                         |
| 757 |    | dan moet ons hom 'n entjie verder vat. Nie net hou waar hy is nie. <i>Therefore, to</i>                |
| 758 |    | <i>have a learner who is confidently engaged in numeracy activities, the role of the</i>               |
| 759 |    | <i>teacher is to be understanding, helpful, and excited to address the learner's</i>                   |
| 760 |    | <i>language and numeracy barriers are vital. The teachers must assure that their</i>                   |
| 761 |    | <i>presentation of numeracy activities are inviting and exciting.</i> Goed, dan sê ons                 |
| 762 |    | ook die rol van die onderwyseres is om te guide, to support and to encourage. .                        |
| 763 |    | Goed, is daar enige iets anders wat jy wil byvoeg? Is daar iets anders wat jy as                       |
| 764 |    | 'n tema sou wou ingebring het wat nie hier ingekom het nie?  |
| 765 | P9 | Nee, E.  |
| 766 | I  | Jy voel dat ons het alles gedek?   |
| 768 | P9 | Ja.  |
| 769 | I  | Goed. Baie dankie. Juffrou, ek wil vir jou baie, bie dankie sê dat ek in jou klas                      |
| 770 |    | kon inkom vir 'n video opname en dankie dat jy bereid was om met my hierdie                            |
| 771 |    | onderhoud te voer. Is daar enige iets anders wat jy wil byvoeg?  |

|     |    |                                     |
|-----|----|-------------------------------------|
| 772 | P9 | Nee dankie E.                       |
| 773 | I  | Baie, baie dankie. Ek waardeer dit. |

## APPENDIX O

|   |
|---|
| <b>TRANSCRIPT OF SEMI-STRUCTURED INDIVIDUAL INTERVIEW:<br/>PARTICIPANT 10</b> |
|---|

I – Interviewer; P10 - Participant 10

| Line | I/P | Transcription  |
|------|-----|--|
| 1    | I   | Do you mind if I make a tape recording of what we are saying?                    |
| 2    | P10 | No.  |
| 3    | I   | Yes I don't want to identify you on this whole thing. I guarantee your           |
| 4    |     | anonymity,   |
| 5    | P10 | Okay   |
| 6    | I   | Just tell me some background of you. How long have you been a teacher?           |
| 7    | P10 | This is now my second, I am going into my third year.                            |
| 8    | I   | Your third year? And it is the first time that you are teaching? What have       |
| 9    |     | you done before you came here?   |
| 10   | P10 | I worked at [unclear] bank.  |
| 11   | I   | So you were an office person?  |
| 12   | P10 | That's right.  |
| 13   | I   | And then you came down here, and started working                                 |
| 14   | P10 | I hated working in an office. And I was actually filling in for the secretary,   |
| 15   |     | she went to have a baby, and they asked me if I would be interested in           |
| 16   |     | helping for six months   |
| 17   | I   | Six months?  |
| 18   | P10 | And then, just being in this whole environment, it's awesome                     |
| 19   | I   | You fell in love?  |
| 20   | P10 | Ja. I mean, you've been here today and you can see why. And then of course,      |
| 21   |     | the pre-primary teacher had to relocate and the post came open for this. I did   |
| 22   |     | apply, obviously on the grounds that I was going to study, which I have been     |
| 23   |     | doing through correspondence, but now my main [unclear] is that, I am not        |
| 24   |     | going to mention names, but when I asked somebody who is also, you know, at      |
| 25   |     | a pre-school, what course should I do? Because I either wanted to apply to       |
| 26   |     | UNISA or ..., I was advised that the INTEC one would be adequate, you see.       |
| 27   |     | But now I am finding that the INTEC one, is very basic. It's actually so boring. |
| 28   |     | I have learnt more, obviously I had a lot of help from Annette. She's been very  |
| 29   |     | supportive. But I learnt more by sitting in with the previous Grade R teacher    |

|    |     |   |
|----|-----|---|
| 30 |     | and what mrs ...  |
| 31 | I   | The district office?  |
| 32 | P10 | Has done.   |
| 33 | I   | Just tell me, who pays you? Are you part of a ...                               |
| 34 | P10 | I am private.   |
| 35 | I   | Are you private?  |
| 36 | P10 | Yes.  |
| 37 | I   | So you don't get any grant from the government?                                 |
| 38 | P10 | We do get a grant.  |
| 39 | I   | So you get a grant-in-aid per month that's suppose to be your salary?           |
| 40 | P10 | Yes.  |
| 41 | I   | Plus the SGB add to it?   |
| 42 | P10 | No, they deduct the grant from my salary.                                       |
| 43 | I   | Are they deducting the grant from your salary?                                  |
| 44 | P10 | Yes.  |
| 45 | I   | Okay. Just tell me something else, did you attend any of the courses the        |
| 46 |     | department is offering you?   |
| 47 | P10 | Every one that has come up since I have been her, I have gone to.               |
| 48 | I   | Okay, that's all the NCS training and then it was also the pre-school training, |
| 49 |     | the ECD training?   |
| 50 | P10 | Yes, must I show you?   |
| 51 | I   | Yes, please do.   |
| 52 | P10 | I didn't do module 1 and 2.   |
| 53 | I   | So you only started off with module 3?  |
| 54 | P10 | Yes.  |
| 55 | I   | Do you've got the module 1 and 2 stuff?   |
| 56 | P10 | I am still waiting for them to send it to me.                                   |
| 57 | I   | Will you?   |
| 58 | I   | This is very good and I have also seen on the desk you've got one of ACE?       |
| 59 | P10 | Yes.  |
| 60 | I   | That also helps quite a lot.  |
| 61 | P10 | Yes.  |
| 62 | I   | If you follow that one you will ...   |
| 63 | P10 | Yes,  |
| 64 | I   | Okay, so you are not formally train, but your are busy with, you are in your    |
| 65 |     | third year with INTEC?  |
| 66 | P10 | INTEC.  |
| 67 | I   | INTEC yes. Okay, whilst you do that, what is your [unclear]?                    |
| 68 | P10 | That's what I wanted to ... I've been giving this number.                       |

|     |     |   |
|-----|-----|---|
| 69  | I   | Okay, the Centre for Social Development.  |
| 70  | P10 | And I was told that they do courses.  |
| 71  | I   | Yes they do.  |
| 72  | P10 | So I am keen to phone her.  |
| 73  | I   | Phone her and speak to J, she's the person there.                                 |
| 74  | P10 | Who?  |
| 75  | I   | Ja,. Goed, just to come back to the environment here, you've got, this is a rural |
| 76  |     | community, about 20 kilometres, 25 kilometres away from Port Alfred. This is      |
| 77  |     | a private school primarily because I think only two teachers are being paid by    |
| 78  |     | the department.   |
| 79  | P10 | Yes.  |
| 80  | I   | How many learners do you have in your class?                                      |
| 81  | P10 | See, I don't count the two little ones.   |
| 82  | I   | Yes.  |
| 83  | P10 | I have actually got 17.   |
| 84  | I   | You've got seventeen? And they are multi-grade nè? From about three years         |
| 85  |     | until to six, seven years?  |
| 86  | P10 | Up to six..   |
| 87  | I   | Up to six years. Okay. And I have seen that you have only two boys that are       |
| 88  |     | black, isiXhosa speakers?   |
| 89  | P10 | Yes.  |
| 90  | I   | Okay, so they are still learning English?   |
| 91  | P10 | Ja.   |
| 92  | I   | But you teach in the mother tongue, home language of English here?                |
| 93  | P10 | Yes.  |
| 94  | I   | Most of your children are English?  |
| 95  | P10 | Yes   |
| 96  | I   | Any Afrikaans children?   |
| 97  | P10 | I don't know if K, I know they speak Afrikaans, but I think ...                   |
| 98  | I   | It is more bilingual?   |
| 99  | P10 | Yes.  |
| 100 | I   | Goed, that was just some background on your class and yourself.                   |
| 101 | P10 | I think also because of the transport, our fees are obviously a bit higher, you   |
| 102 |     | know? They got to tie in the transport with the busses and ties them with the     |
| 103 |     | school fees. I also think, because of us being a small school, we are trying to   |
| 104 |     | keep 15 to teacher ratio.   |
| 105 | I   | 15 to one teacher primarily?  |
| 106 | P10 | From what I understand of the whole set up here..                                 |
| 107 | I   | This is a lovely thing about that. Okay, what we did in our focus group, I gave   |

|     |     |   |
|-----|-----|---|
| 108 |     | you three statements. Tell me what you think or feel or call to mind when I use             |
| 109 |     | the term numeracy? And tell me about your experiences in implementing                       |
| 110 |     | numeracy in your classroom as well as tell me about your experiences of                     |
| 111 |     | attending numeracy in-service training. And then after that, you people wrote               |
| 112 |     | me litte cards, and we sorted those cards into groups, and named those groups               |
| 113 |     | with topics. And we have identified four topics. The one is <i>Content</i> , the            |
| 114 |     | second one is <i>Enrichment and remedial activities</i> . The third one was <i>Feelings</i> |
| 115 |     | and the fourth one was about, I forgot, enrichment/remedial, <i>Perceptions and</i>         |
| 116 |     | <i>experiences of in-set</i> . Okay, once we have identified the content, we wrote a        |
| 117 |     | descriptive paragraph for each of these 27themes. Now I want to come back to                |
| 118 |     | these four topics that we have identified. And I want to know what are your                 |
| 119 |     | feelings, and your perceptions and your beliefs about it. The first one that we             |
| 120 |     | have identified was <i>Content</i> . Tell me, how do you feel about content? Do you         |
| 121 |     | know what content you must teach?   |
| 122 | P10 | I feel pretty confident about it.   |
| 123 | I   | Where do you get the content?   |
| 124 | P10 | You mean all the ideas, the themes?   |
| 125 | I   | What you must teach. How do you know what you must teach?                                   |
| 126 | P10 | From our LO's and your planning .   |
| 127 | I   | So, where do you get your LO's?   |
| 128 | P10 | I got quite a nice, sort of abbreviated version when I went to that course.                 |
| 129 |     | Otherwise in the ACE book they've got   |
| 130 | I   | Okay, so in their teacher's guide?  |
| 131 | P10 | Yes.  |
| 132 | I   | Well, that was nice of that one.  |
| 133 | I   | Ja, that one, the work schedule.  |
| 134 | P10 | They told you and you know the third term covers this. Which I thought was                  |
| 135 |     | quite nice because if you ever have children from another province, if everyone             |
| 136 |     | was following that, they'd be on the same page as you, you know.                            |
| 137 | I   | Where they specify which Learning Outcome in which term must be taught?                     |
| 138 | I   | Ja, So there you get content of what the learners must know about nè?                       |
| 139 | P10 | Yes.  |
| 140 | I   | Okay, and your themes? Where do you get that from? Also from the book?                      |
| 141 | P10 | Yes, but I;d like to link the themes. Especially if they are going to be in the             |
| 142 |     | class for three years, it is nice to do something different. Because they are               |
| 143 |     | clever, they will say, ah, but last year we went to the traffic department or               |
| 144 |     | wherever, so I try to link up different themes. I think just to expose them to as           |
| 145 |     | much as possible. Everything, I don't think they are too young to be exposed to             |
| 146 |     | learning about volcanoes,. Their minds are like sponges now, so, everything, all            |

|     |     |   |
|-----|-----|---|
| 147 |     | around us, whatever we are expose to, I'll try to ...                             |
| 148 | I   | I want to come back to your planning under content, and more specifically to      |
| 149 |     | the LO's you said and I want to go more to the assessment standards because       |
| 150 |     | LO's, especially numeracy, your leaning outcomes are basically focussing on       |
| 151 |     | mathematics. And you get here five learning outcomes. The first one is            |
| 152 |     | counting, and the second one is patterns, and the third outcome is shapes and     |
| 153 |     | measurement. The fourth is measurement and the fifth is data handling. Under      |
| 154 |     | those you got little bullets with assessment standards.                           |
| 155 | P10 | Yes.  |
| 156 | I   | Do you feel comfortable with all those assessment standards? Do you need          |
| 157 |     | extra help, guidance? Are you implementing everyone of them?                      |
| 158 | P10 | Jaaa, I am trying to. Actually, we've got files, we've got to tick off for each   |
| 159 |     | theme. So it's quite nice because then you'll see that you are covering           |
| 160 |     | everything. Ja, all the LO's and assessment. That's quite a basic way of... So    |
| 161 |     | you can see, People who help us, okay, I have covered that and basically, the     |
| 162 |     | whole year is covered in some way or another.                                     |
| 163 | I   | So you feel you cover all the mathematic assessment standards in the year?        |
| 164 | P10 | Yeah, I mean, you try to. But I do realise that at somehow, you repeat a lot, but |
| 165 |     | I think that is also re-inforcing.  |
| 166 | I   | Okay. I've noticed today that you have done counting. You spent a lot of time     |
| 167 |     | on counting   |
| 168 | P10 | Yes.  |
| 169 | I   | and patterns, and with the counting and patterns you also had breaking up and     |
| 170 |     | building of little sums. Do you make use of any problem-solving, where you        |
| 171 |     | ask the learners to give you, for example, you said to them, you had, I think it  |
| 172 |     | was eight smarties. You ate up all eight, how many are there left? They had to    |
| 173 |     | show you the 0 on the little card. But do you let them, do you ever give them     |
| 174 |     | chances to make up their own stories?   |
| 175 | P10 | No.   |
| 176 | I   | Have you ever think about it? Why not?  |
| 177 | P10 | I think it is, yeah, I don't know whether, you mean to give them an opportunity   |
| 178 |     | to think and reason? I mean, I could do, I wouldn't have a problem doing it. I    |
| 179 |     | just need   |
| 180 | I   | Do you need some guidance in how to assist learners in, what is the word, how     |
| 181 |     | to develop their thinking and reasoning skills, their problem-solving skills?     |
| 182 | P10 | Yes.  |
| 183 | I   | You feel that you need their guidance in? Because I have also noticed in all      |
| 184 |     | your activities today, there wasn't a lot of exploration and experimentation that |
| 185 |     | come on. The only decision-making that you had with the learners, were when       |

|     |     |  |
|-----|-----|--|
| 186 |     | you gave them the choice was with your theme discussion, where they could choose who is going to be a fireman and who is going to be the reporter of the |
| 187 |     | Fire.  |
| 188 | P10 | Yes.   |
| 189 | I   | But otherwise, you don't give them a lot of choosing to do?  |
| 190 | P10 | Okay.  |
| 191 | I   | So you also need to think about that.  |
| 192 | P10 | So, it's more teacher-directed?  |
| 193 | I   | I don't know, how do you feel? If you think of your lessons ...  |
| 194 | P10 | I mean, I see what you mean now, [unclear]   |
| 195 | I   | But if you think about today's programme, how many times do you feel did you   |
| 196 |     | have really learner involvement? Or learner-centredness?   |
| 197 | P10 | Jaa...I thought with the candles they have to think how old they are., you know.   |
| 198 |     | That I thought was a ...   |
| 199 | I   | Learner-centred activity?  |
| 200 | P10 | Ja. They decorate their cake as they wish. I put out materials, but also with the  |
| 201 |     | candles, obviously I helped the little ones, but the older ones,   |
| 202 | I   | counted themselves.  |
| 203 | P10 | They must, ja, so they can see I am four, I do need four candles on my cake.   |
| 204 | I   | Okay.  |
| 206 | P10 | Is that not a way ...?   |
| 207 | I   | What the group said under <i>Content</i> , we said it was, it had to do with <i>colours</i> ,  |
| 208 |     | <i>doubling, halving, constructing, numbers, counting, sequencing, shapes, data</i>  |
| 209 |     | <i>handling, mathematics, mass, concrete apparatus, patterns, estimation, halving,</i>   |
| 210 |     | <i>sorting, more/less/equal, balancing, measurement, collecting, foundation for</i>  |
| 211 |     | <i>later abstract thoughts and realizing, think and reason.</i> Would you like to add  |
| 212 |     | anything else to this content or are you happy with this? What the group said.   |
| 213 | P10 | There's a lot of this integrated in my ...   |
| 214 | I   | Yes.   |
| 215 | P10 | Okay.  |
| 216 | I   | Do you feel happy with that?   |
| 217 | P10 | Yes.   |
| 218 | I   | Okay, let us read the descriptive paragraph. <i>Numeracy includes the acts of</i>  |
| 219 |     | <i>identifying, constructing, building and reproducing of</i> all this that we have just   |
| 220 |     | said, <i>by the Grade R learner in concrete form in order to lay a numeracy</i>  |
| 221 |     | <i>foundation for later abstract thinking and reasoning.</i> Do you also agree with  |
| 222 |     | that?  |
| 223 | P10 | Yes.   |
| 224 | I   | Okay, let's go on to the next one where we spoke about <i>Enrichment/remedial</i>  |

|     |     |   |
|-----|-----|---|
| 225 |     | <i>activities</i> . Tell me, do you've got any learners in your class whom you feel are |
| 226 |     | having remedial problems? Are there slow learners?                                      |
| 227 | P10 | Yes, definitely.  |
| 228 | I   | How many?   |
| 229 | P10 | I know with the language thing ...  |
| 230 | I   | Okay, that's two learners that got, that are taught in English as their second          |
| 231 |     | language. And the one only came, you said to me, three months ago?                      |
| 232 |     | Beginning of this term?   |
| 233 | P10 | Yeah, it's been a [unclear] to see, I don't even have to assess him, it's just to let   |
| 234 |     | the English get going. So I am not too concerned, because I know they still got         |
| 235 |     | to build their understanding. But I am happy with my Grade R's, ...                     |
| 236 | I   | Are you finding with the Grade R's, are there learners that, when they make a           |
| 237 |     | number, they turn it around? For instance, like this one, this is a 5?                  |
| 238 | P10 | Ja.   |
| 239 | I   | Do you find that often?   |
| 240 | P10 | That is a Grade R book but then R wanted an extra one, she's four years old             |
| 241 | I   | Is she four years old? So she is a bit young, When does she turn 5?                     |
| 245 | P10 | Next June.  |
| 246 | I   | Next June? So she is [unclear – interrupted by learners that the teacher had to         |
| 247 |     | calm down].   |
| 248 | P10 | Boys seek their assurance from that other little boy. [look in learner's book].         |
| 249 | I   | What's his name, let me quickly see? Okay, yes.   |
| 250 | P10 | He was the little [unclear] one. I don't know if you noticed. He is okay, but he        |
| 251 |     | is also reversing.  |
| 252 | I   | How do you address this reversing of them? The 2, he definitely reverses.               |
| 253 | P10 | Even this one.  |
| 254 | I   | Yes, yes.   |
| 255 | P10 | I'm just, everytime correct them and moulding.  |
| 256 | I   | And showing them physically how to ...  |
| 257 | P10 | Ja, and give them pegboards and they can do a 4 on the pegboard. I've got a             |
| 258 |     | nice number puzzle, and in sand. Yeah, 'cause I mean I don't want to be too,            |
| 259 |     | because immediately they kind of withdraw. So all the time emphasising, just            |
| 260 |     | practising. They all seem to have a finger ...  |
| 261 | I   | Where they turn their numbers around?   |
| 262 | P10 | Ja.   |
| 263 | I   | How many times, for instance, this one I can see, you can see the 7 and the 9.          |
| 264 | P10 | Of course, she just loves [unclear] we haven't done the 9 yet. She just thrives         |
| 265 |     | on work and ...   |
| 266 | I   | The 7, I am worried about the 7. You need to form it correctly, give a lot of           |

|     |     |   |
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| 267 |     | practices to do. The 2 there as well. practices to do. The 2 there as well.         |
| 268 | P10 | It's not like, when the mix up the <i>b</i> and the <i>d</i> ?                      |
| 270 | I   | Yes, it's because they haven't got it internalised yet. That's why you've got to    |
| 271 |     | do it very concretely and physically. With the dough, do it in the air, tracing     |
| 272 |     | around. Before you give them workbooks, let them trace it. Instead of making        |
| 273 |     | the 7, you do the dots and then trace it around.                                    |
| 274 | P10 | And these [show examples] are honestly, just extra.                                 |
| 275 | I   | How many times a week do you use workbooks or worksheets? Every day?                |
| 276 | P10 | No, I wouldn't say everyday.  |
| 277 | I   | Three times a week?   |
| 278 | P10 | Yeah, about three times a week.   |
| 279 | I   | That's for numeracy and for literacy as well?                                       |
| 280 | P10 | Ja.   |
| 281 | I   | Apart from this, attending of remedial numbers, what other learning problems        |
| 282 |     | do you've got and language barriers? Do you've got learners who are                 |
| 283 |     | hyperactive in the class? How many of them?   |
| 284 | P10 | About four of them.   |
| 285 | I   | About four of them?   |
| 286 | P10 | Ja.   |
| 287 | I   | Okay, why do you say they are hyper active?   |
| 288 | P10 | [unclear] I don't want to label any as hyperactive, it could just be a listening    |
| 289 |     | skill.  |
| 300 | I   | That they have a concentration problem sometimes?                                   |
| 301 | P10 | Yes. You know, you don't want to label anyone as being hyperactive but there        |
| 302 |     | are definitely, three or four, that cannot [stibble? Unclear]. And it's is not that |
| 303 |     | we sit too long. We have a break or we jump up and down. I am just finding          |
| 304 |     | that they ...   |
| 305 | I   | Their attention goes? And they don't really listen to what you ...                  |
| 306 | P10 | Fluctuating. And they are not taking ... I've got to repeat instructions.           |
| 307 | I   | Okay. Do you've got learners that you feel are gifted? The other side?              |
| 308 | P10 | Mmm.  |
| 309 | I   | How do you handle those learners?   |
| 310 | P10 | Just try, I mean if they want to do something, don't push them down and say         |
| 311 |     | no., You are not Grade R, you cannot do that.                                       |
| 312 | I   | So it's some of the younger learners that are coming up to the Grade R level?       |
| 313 | P10 | Ja. You know, they want to be involved. Like today, I only had my Grade R's         |
| 314 |     | but I would have had three, definitely staying in the others, they could choose if  |
| 315 |     | they want to continue or whether they are going to do their activities.             |

|     |     |  |
|-----|-----|--|
| 316 |     | Obviously choose anything of the shelves, they can't be walking around. They         |
| 317 |     | must do something constructive. But you would have noticed [unclear] and             |
| 318 |     | wanted to learn more.  |
| 319 | I   | Okay. Just say to me, do you feel that you've got enough skills or do you need       |
| 320 |     | more training on how to handle these group of learners?                              |
| 321 | P10 | [unclear]  |
| 322 | I   | So you also say to me, it is more on remedial and stimulating learners . Let's       |
| 323 |     | look what the group said. They said <i>Remedial and enrichment activities can be</i> |
| 324 |     | <i>done through rhymes, creative activities, shopping as a theme, poems, beads</i>   |
| 325 |     | which you did, <i>dominoes, movement, integration, by having a nature table and</i>  |
| 326 |     | <i>nature walks, drawings, songs, blocks, puzzles, numbers in everyday life.</i> I   |
| 327 |     | noticed that you brought in a lot of numbers, you started off the day with a         |
| 328 |     | counting song, when they had to go for outside play for the sports day, you had      |
| 329 |     | them counting how many beanbags.   |
| 330 | P10 | Just today, was numbers, you know.   |
| 331 | I   | You will not necessary count that much?  |
| 332 | P10 | No.  |
| 333 | I   | Okay, anything you want to add to this one?  |
| 334 | P10 | You've got there, I think movement is very important.                                |
| 335 | I   | Our descriptive paragraph is: „ <i>Enrichment/remedial activities could include</i>  |
| 336 |     | <i>then all those we just said over there in order to ensure that learners are</i>   |
| 337 |     | <i>internalising concretely numeracy concepts and experiences it as everyday's</i>   |
| 338 |     | <i>life activities.</i> Okay, let's go on to the next one.                           |
| 339 | P10 | Does that mean they learn through play?  |
| 340 | I   | Yes, they learn through play. But I have noticed, now that the school is out,        |
| 341 |     | your learners are playing in the fantasy corner. Do they play during the day in      |
| 342 |     | your fantasy corner? Or are you more fixed on the programme?                         |
| 343 | P10 | Ja, it depends on who finishes the activity. I had some slow workers. And            |
| 344 |     | mainly, the fantasy corner is sort of the last hour of the day. They can play in it  |
| 345 |     | during break.  |
| 346 | I   | Oh, during breaktime.  |
| 347 | P10 | They can choose, but I do agree I rarely play.                                       |
| 348 | I   | During a daily programme?  |
| 349 | P10 | Ja. I might do, like puppet shows or that type of thing for literacy. Or dress up    |
| 350 |     | if they are going to do a little skit for me. But I agree, not everyday.             |
| 351 | I   | And your block play?   |
| 352 | P10 | Ja, they also do play every day. Once I have done the activities, they normally      |
| 353 |     | can choose to do a puzzle or a game or the blocks. But what I would like to do       |
| 354 |     | as well, is actually to make construction and they have to try and copy it, or       |

|     |     |   |
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| 355 |     | like when we did homes as out theme. So we do use blocks actually a lot. So I           |
| 356 |     | would say, normally every day.  |
| 357 | I   | Normally everyday, for the last fifteen minutes of the creative activities, about?      |
| 358 | P10 | Ja.   |
| 359 | I   | After they have finished their work, their physical work of either painting or          |
| 360 |     | drawing or cutting, then they are allowed to do it?                                     |
| 361 | P10 | Ja. They basically, they know they have to do a puzzle some time during the             |
| 362 |     | day. Okay, so whether they do it after the activities, if they have done it and         |
| 363 |     | there is still time, they go to the blocks. I normally prefer that they do an           |
| 364 |     | educational game or a puzzle first, and then they go to the blocks, ja. Unless it       |
| 365 |     | is block, unless I do a theme and they got to copy a design.                            |
| 366 | I   | Okay, goed. Your perceptions and experiences of inset? How did you find the             |
| 367 |     | training?   |
| 368 | P10 | I enjoyed it. I really, I was quite, because there was some negative things came        |
| 369 |     | up and I, I really find it beneficial. But then I, as one of the other ladies           |
| 370 |     | commented, it was for the underprivileged, which I am, you know.                        |
| 371 | I   | So you found it very, you enjoyed it?   |
| 372 | P10 | I really benefitted from it, you know. I came back with some really interesting         |
| 373 |     | ideas, [interruption by learners], so ja, I was quite positive.                         |
| 374 | I   | Positive about the training?  |
| 375 | P10 | I took a little bit of offence, you know, but I just feel it is fine, I benefitted from |
| 376 |     | it, whether it is basic to somebody else or whether ...                                 |
| 377 | I   | You were never part of the SANTS training that went on last year because you            |
| 378 |     | only came in two years ago, into this course?   |
| 379 | P10 | Ja, this is my second year.   |
| 380 | I   | It's your second year?  |
| 381 | P10 | Ja,   |
| 382 | I   | So, you weren't involved with the training that a group of ladies got in                |
| 383 |     | Grahamstown on Saturdays and over weekends?   |
| 384 | P10 | No.   |
| 385 | I   | You didn't get that one?  |
| 386 | P10 | We were, I mean a lot of them I wasn't informed, because I was here then. But           |
| 387 |     | no one ...  |
| 388 | I   | Informed you about that one?  |
| 389 | P10 | No, no.   |
| 390 | I   | Okay, okay. Because that was in ...   |
| 391 | P10 | Even Module 1 and 2, I was teaching at the time, but I knew nothing about it.           |
| 392 | I   | Joee!   |
| 393 | P10 | Honestly.   |

|     |     |   |
|-----|-----|---|
| 394 | I   | Ja, ja.   |
| 395 | P10 | Because everyone that I find out about, I mean J was supportive, I was able to                        |
| 396 |     | go and attend them.   |
| 397 | I   | Ja. And then the assessment, how do you find the assessment?  |
| 398 | P10 | You mean the rubrics and all the types or forms of assessment? It wasn't like it                      |
| 399 |     | was totally foreign to me.  |
| 400 | I   | Okay, and your planning? How do you find your planning?   |
| 401 | P10 | No, no, it's coming on. I've got a nice planning schedule which, I found it a bit                     |
| 402 |     | too much, it was confusing. But then I got quite a nice one from A, if I just can                     |
| 403 |     | show you ...  |
| 404 | I   | Yes, put out like that, yes. Okay, okay, ja, that's also fine.  |
| 405 | P10 | You see I was using [interruption by learner], [going through file]. This is the                      |
| 406 |     | one I got from that book.   |
| 407 | I   | From that book?   |
| 408 | P10 | Ja,   |
| 409 | I   | But your prefer this one? It's fine, it's fine.   |
| 410 | P10 | Is it okay?   |
| 411 | I   | Okay, let's look at what the group said about it. <i>Looking for more stimulation</i> ,               |
| 412 |     | you said you found that.  |
| 413 | P10 | Yes.  |
| 414 | I   | <i>Sometimes scared, unsure about the methodology of INSET workshop</i> , were you                    |
| 415 |     | also scared at your first workshop?   |
| 416 | P10 | Yes. You know, I didn't know whether I was going to be an idiot or not know                           |
| 417 |     | what was going on, you know what I mean?  |
| 418 | I   | You coming from that you don't got an official teaching background.                                   |
| 419 | P10 | Yes, whether they will think , and I didn't find it at all. We were sharing stuff,                    |
| 420 |     | ahah, that's a good idea, you know they made me feel ...  |
| 421 | I   | Eelcome and at ease?  |
| 422 | P10 | Yes.  |
| 423 | I   | Okay. <i>Not limited, previous numeracy INSET was suited for underprivileged</i>                      |
| 424 |     | <i>only</i> , that's what you just said, <i>very basic</i> , which you also said, <i>Need to know</i> |
| 425 |     | <i>more about numeracy</i> , do you feel you still need more, to know about                           |
| 426 |     | numeracy?   |
| 427 | P10 | I think all the time, the more the better. I don't think you can ever know too                        |
| 428 |     | much, honestly. I don't think, if you are in the business for 25 years, you still                     |
| 429 |     | can learn something. Be it an idea that someone shares with you.                                      |
| 430 | I   | Or you share with somebody else?  |
| 431 | P10 | Ja,   |
| 432 | I   | <i>Waste of time, motivated, vague, som,etimes excited, to be open in mind, not</i>                   |

|     |     |   |
|-----|-----|---|
| 433 |     | <i>alone, worth it, relevant, very keen to attend, beneficial.</i> Okay, Let's see what |
| 434 |     | the group wrote: <i>perceptions and experiences of INSET include:</i> all this we've    |
| 435 |     | just said now, <i>Thus it is being experienced positively and negatively. Teachers</i>  |
| 436 |     | <i>want to attend INSET because of being motivated to improve their teaching</i>        |
| 437 |     | <i>strategies and to know more as well as to share and learn [with other words to</i>   |
| 438 |     | <i>collegiate with one another].</i> That's what you've said to me, more or less?       |
| 439 | P10 | Mmm.  |
| 440 | I   | Okay,   |
| 441 | P10 | That one alone, to help you with your planning, is brilliant, you know.                 |
| 442 | I   | Ja, ja. Except with your Grade 1 teacher and your principal, do you meet with           |
| 443 |     | other Grade R teachers? Are you in a cluster, that you sit with them and plan?          |
| 444 |     | Or not really?  |
| 445 | P10 | No, not really. I've very much liked to sit with L, because she is brilliant, I just    |
| 446 |     | like her approach and she doesn't talk down. She's been teaching for years and          |
| 447 |     | never has she ever made me feel inferior. I've said to J, if I can sit once or          |
| 448 |     | twice a term with her, just to share, to be... I've sat with T a couple of days, as     |
| 449 |     | well. I think it is all beneficial but we're not, get together.                         |
| 450 | I   | Sit together and plan?  |
| 451 | P10 | No.   |
| 452 | I   | Goed, the fourth one was about <i>Feeling, feelings of the teachers and the</i>         |
| 453 |     | <i>learners.</i> How do you, what's your feelings about it?                             |
| 454 | P10 | You mean, I could always feel positive.   |
| 455 | I   | Yes, how do you feel?   |
| 456 | P10 | If they could just learn a thing.   |
| 457 | I   | You are happy?  |
| 458 | P10 | I am happy. If they can come to something [unclear], and re-inforces it, I am           |
| 459 |     | very, I don't think you should ever, each child learns at their own pace,               |
| 460 |     | [unclear], you know what I mean?  |
| 461 | I   | Yes, competition amongst them?  |
| 462 | P10 | Ja, they will be competetive as adults, they don't need to be when they are so          |
| 463 |     | young. And you see my thing is more nurturing. I belief if you nurture and you          |
| 464 |     | know, you praise, you will get results. So, if some of them give their best, I am       |
| 465 |     | happy. If they kind of scribbled, if they say it is their best, I am happy. I am        |
| 466 |     | not going to say to them, but you coloured it in yellow and it is suppose to be         |
| 467 |     | green and you know, was that scribbling or , I am quite happy in the                    |
| 468 |     | environment we are working and I do get results. So I'm sure they have, you             |
| 469 |     | know I never let them feel inferior, [unclear] but just practisicing, it's fine. You    |
| 470 |     | are not going to get it write the first time. We will get it right, but we need         |
| 471 |     | practise. Ja, I feel quite, I feel positive. I've also had a good response from         |

|     |     |   |
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| 472 |     | their [unclear] where we gathered they also feel safe in their environment.           |
| 473 | I   | Both of them are more or less the same, We said; <i>a teacher must be happy, she</i>  |
| 474 |     | <i>can be encouraging, she must be comfortable , lively, you must be fun, look,</i>   |
| 475 |     | <i>sharing, language barriers, excitement, excited, understanding, challenge,</i>     |
| 476 |     | <i>helpful, confident, enjoyment, that's what you said to me, you've got a lot of</i> |
| 477 |     | <i>enjoyment.</i>   |
| 478 | P10 | It's good to be challenged. It's good to have a challenge.                            |
| 479 | P10 | Ja, but the learners also challenged yourself.  |
| 480 | I   | Okay, let's look what we've said: <i>Feelings that are experienced by teachers</i>    |
| 481 |     | <i>and learners are</i> and we have just named them,                                  |
| 482 | P10 | Is this only from our group or is it ...?   |
| 483 | I   | From your group.  |
| 484 | P10 | Because I am concerned about the barriers to learning and the planning that           |
| 485 |     | didn't come up in our group.  |
| 486 | I   | Okay. <i>It is important that learners are challenged for learning to take place</i>  |
| 487 |     | <i>even though the learner might feel insecure due to no prior numeracy</i>           |
| 488 |     | <i>knowledge. Therefore, to have a learner who is confidently engaging with</i>       |
| 489 |     | <i>numeracy activities, the role of the teacher is to be understanding, helpful,</i>  |
| 490 |     | <i>exciting and to address the learners language and numeracy barriers are vital.</i> |
| 491 |     | <i>The teacher needs to assure that her presentation of numeracy activities are</i>   |
| 492 |     | <i>inviting and exciting. Her role is to guide, support and to encourage.</i>         |
| 493 | P10 | Ja.   |
| 494 | I   | Thank you very, very much.  |

## APPENDIX P

|   |
|---|
| <b>TRANSCRIPT OF PILOT SEMI-STRUCTURED INDIVIDUAL<br/>INTERVIEW: PARTICIPANT 11</b> |
|---|

I – Interviewer; P11 – Participant 11

| Line | I/P | Transcription  |
|------|-----|--|
| 1    | I   | Thanks again, Participant 11, for having me today and for video-taping your          |
| 2    |     | class. Is it in order that I audio-tape this interview?                              |
| 3    | P11 | No problem.  |
| 4    | I   | No problem. Okay, if I, it was interesting for me, what you have done with your      |
| 5    |     | children. I can really see that pre-school is a passion for you. But just give me    |
| 6    |     | some background about yourself. How long have you been a pre-school or               |
| 7    |     | involved in the Early Childhood?   |
| 8    | P11 | I have been in Early Childhood Education, ever since I trained by Barclay House      |
| 9    |     | Training College. I did a three year diploma there.                                  |
| 10   | I   | That was in Cape Town?   |
| 11   | P11 | That was in Cape Town, Barclay House. Straight after college, I went into            |
| 12   |     | lecturing. I lectured for two years at Loveday College, where we trained             |
| 13   |     | Foundation Phase teachers or then, it was junior primary teachers. Thereafter, I     |
| 14   |     | had my own school, where, that was for about five years and then in 1988, I          |
| 15   |     | started at H. I was first a teacher for three years and then I became the principal  |
| 16   |     | at H, ever since. Twenty-one years.  |
| 17   | I   | Twenty-one years?  |
| 18   | P11 | So I have always been basically with your pre-school child. And after that, I        |
| 19   |     | trained, I basically continued training, I did the HDE in pre-primary and then after |
| 20   |     | that, which was my fourth year, I continued to do my FDE in pre-primary training     |
| 21   |     | at teaching science at the junior primary.   |
| 22   | I   | Okay, but apart from that, you've done also some other courses? I know you've        |
| 23   |     | done Kindermuzik?  |
| 24   | P11 | I have done the Kindermuzik, I am a trained facilitator, licensed facilitator and I  |
| 25   |     | have done also a course in Human Relations and Public Relations, that was in         |
| 26   |     | business.  |
| 27   | I   | Okay, and that came, especially the Human Relations, came out with ...               |
| 28   | P11 | When I became a principal, I thought I needed to do something more, because          |
| 29   |     | you are dealing with humans, you know. Basically with the personnel on a large       |

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| 30 |     | basis and also, I did have to mark at my school and things like that.                    |
| 31 | I   | Okay, to your pre-school education as such, Brain-gym? I saw                             |
| 32 |     | You ...  |
| 33 | P11 | Yes, I am also a Brain-gym teacher and an Audioblox teacher. Ja, I have just             |
| 34 |     | gone on an integrated learning therapy course.   |
| 35 | I   | Okay?  |
| 36 | P11 | As well, which was mind-blowing. You can actually re-pattern the brain, for              |
| 37 |     | children with especially ADD problems. I've got, I would say, about three                |
| 38 |     | children in my class that [unclear] ADD and have those ADD problems and                  |
| 39 |     | perceptual problems and I did the ITL course to be able to help them.                    |
| 40 | I   | Where did you do this course?  |
| 41 | P11 | In Johannesburg, with professor Shirley Cock..   |
| 42 | I   | Okay, tell me, how many kids do you've got in your class?                                |
| 43 | P11 | I have 25 children.  |
| 44 | I   | 25? And mainly English speaking learners?  |
| 45 | P11 | Yes. I would say 19, I've got 2 Afrikaans children and they will be going to the         |
| 46 |     | English Grade 1.   |
| 47 | I   | English Grade 1 as well, so you prepare them for the English? And you've got             |
| 48 |     | about 2 Black boys?  |
| 49 | P11 | I've got one little Black girl and I've got a Coloured boy and another Portuguese        |
| 50 |     | boy.   |
| 51 | I   | Portuguese boy as well. Coming back to the Black boy, you are also a fluent              |
| 52 |     | isiXhosa speaker?  |
| 53 | P11 | Yes. I am a fluent isiXhosa speaker.   |
| 54 | I   | The Portuguese boy, how do you assess him? In which language? Do you find                |
| 55 |     | that he's got language barriers?   |
| 56 | P11 | Oh yes, his language is no problem. He has got emotional baggage but other than          |
| 57 |     | that, no his language is fine. We do have a problem with all the pre-school              |
| 58 |     | children using this "wordbrang" [laughter]. They don't bring anything, they              |
| 59 |     | "brang" . But I wouldn't say that is distinctive to any particular language group.       |
| 60 |     | It's all the children.   |
| 61 | I   | Okay, okay. Let's focus on what we did on the focus group. We basically                  |
| 62 |     | identified, I have read the three research statements to you, and then you               |
| 63 |     | displayed on cards as a group what your feelings and experiences were about it.          |
| 64 |     | And then we grouped it and then we named these groupings themes, such as, we             |
| 65 |     | identified four , namely <i>Content, Enrichment/remedial activities, Perceptions and</i> |
| 66 |     | <i>experiences of INSET training and Feelings.</i> And then we wrote a descriptive       |
| 67 |     | paragraph. But in a group, the individual's response, can sometimes be                   |

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| 68  |       | overshadowed by the majority. So I am going to go through each of these themes               |
| 69  |       | and I want to know what your personal feeling is about it. The first one is, about           |
| 70  |       | <i>Content</i> . And I want to link your <i>Content</i> to your daily programme. You covered |
| 71  |       | most of them. Where do you get content?  |
| 72  | 81P11 | I tell you what, we have found that, especially in the last two years we are                 |
| 73  |       | changing our approach in that, we used to be bound by a lot of the content that              |
| 74  |       | came out of books that have been already written for Grade R through the ACE                 |
| 75  |       | project and many of the others. And what we have found, because a lot of the                 |
| 76  |       | children in my class, had been at Happy Hours for five years already. That you               |
| 77  |       | do not do ME anymore. There are so many of the things they have done and put                 |
| 78  |       | to bed that I actually got to extend them further. And we have got the knowledge,            |
| 79  |       | the prior knowledge, to be able to do so. With the result that I have changed my             |
| 80  |       | approach and we have changed the themes of the past, because you know, no                    |
| 81  |       | longer is the Post Office actually really relevant. No longer is the Bakery actually         |
| 82  |       | relevant any more. So now what we have done, we have actually taken the                      |
| 83  |       | children and we said, what is interesting them? Because they are exposed to so               |
| 84  |       | much more than children were exposed to years ago. And also, my group of                     |
| 85  |       | children basically come from privilege backgrounds, which make a huge                        |
| 86  |       | difference of you know, where I get my content from as well as I said that the               |
| 87  |       | theme of Spring, we can really enlarge on that. And not just a week on Insects.              |
| 88  |       | And a week on Flowers. Things like that, we can really go into depths now. And               |
| 89  |       | talk about Life Sciences. Go into it in a much more meaningful way for the                   |
| 90  |       | children. So my Units of Inquiry are definitely changing. Very, very definitely.             |
| 91  |       | And I just belief this must change all the time. It is a very dynamic thing and I            |
| 92  |       | must not be bound by that. Often, you know, I do belief that in January you sit              |
| 93  |       | down and, we have done it. We've got the themes for the whole year set out but               |
| 94  |       | if it comes to something and we feel we can spend more time with, or the children            |
| 95  |       | would like to spend more time, we are flexible.  |
| 96  | I     | And then you go in-depth?  |
| 97  | P11   | We really go more into depth. And they become more Units of Inquiry, more                    |
| 98  |       | than just themes.  |
| 99  | I     | And just telling them information?   |
| 100 | P11   | Absolutely.  |
| 101 | I     | So you've got a lot of discovery coming through?   |
| 102 | P11   | A lot of discovery and a lot of children are using our Show and Tell, where they             |
| 103 |       | are bringing things from home to do with the theme.  |
| 104 | I     | Ja, take for instance today, with the wasp.  |
| 105 | P11   | That's right.  |

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| 106 | I   | That was very interesting for me.  |
| 107 | P11 | That's right and then you know you are actually getting through. Very definitely.      |
| 108 | I   | But something that I did notice through your daily presentations today, is that you    |
| 109 |     | interwove the theme, although, you not, as you've said, you've got a broad theme,      |
| 110 |     | and you know what you want to do, and you go in-depth, but you are, more or            |
| 111 |     | less, right from the beginning when you start with the creative activities, right      |
| 112 |     | through to the end of the story, the theme is interwoven in all your activities.       |
| 113 | P11 | Absolutely, into everything. All our finger plays, all our songs, our Bible story,     |
| 114 |     | our Bible songs, everything has got, even our prayer, has got something in from        |
| 115 |     | the theme, so that the children can see it as a whole.                                 |
| 116 | I   | As a whole. But what was also interesting for me, was how you brought                  |
| 117 |     | numeracy, even into your Bible, also interwoven right through, from your creative      |
| 118 |     | activities and free-play up to the story time again.                                   |
| 119 | P11 | Yes.   |
| 120 | I   | Because you asked what is the difference between a tricycle and a bicycle? Those       |
| 121 |     | kind of questions.   |
| 122 | P11 | Yes.   |
| 123 | I   | Interesting for me, you've got an interesting daily programme. You have given          |
| 124 |     | me an example of it, and for everyday you've got more or less a certain idea, but      |
| 125 |     | you've done away with the traditional one where you come in, the kids come in          |
| 126 |     | the morning and then you start off with a formal ring, a greeting ring and a           |
| 127 |     | weather ring and then you go on to creative activities and here about twelve           |
| 128 |     | o'clock, maybe you will do more mental maths or whatever. Just tell me the             |
| 129 |     | background of your daily programme.  |
| 130 | P11 | Well, what we've done is that we've changed the programme from the traditional         |
| 131 |     | one. Because we, we were actually forced to change it when the numbers in              |
| 132 |     | Grade R, we said they could go 30 to 1, and we just said it is impossible to be        |
| 133 |     | able to work meaningful with 30 children to 1. That is an impossibility. What we       |
| 134 |     | did then, I went and did quite a bit of research, and visited a lot of schools right   |
| 135 |     | throughout the country actually, and we were eclectic in taking the best of            |
| 136 |     | everything. I am not for the open classroom where you have different homes for         |
| 137 |     | different activities for I just feel that children must have home-based. Especially    |
| 138 |     | for your insecure child and we found that more and more children are coming            |
| 139 |     | with baggage and insecurity and for them to be moving between different teachers       |
| 140 |     | in one day, I am not for that. So I did more research and I changed the two senior     |
| 141 |     | classes to an Open Framework Model which is basically for the gifted child. It         |
| 142 |     | was developed in America for the gifted child and at Happy Hours we believe that       |
| 143 |     | each child is gifted and that it is up to us to find where that gift lies.--And we did |
| 144 |     | that, basically because we felt that it gives us more one on one time with the         |

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| 145 |     | child, because the children do drop in from quarter past seven to half past seven,    |
| 146 |     | which enables me to actually form a relationship immediately with that child in       |
| 147 |     | the morning. And the first thing that they do is, they do puzzles or games and it is  |
| 148 |     | a non negotiable, they know it is a non-negotiable, they don't kick it and also the   |
| 149 |     | child is fresher in the morning. He is more likely to complete a puzzle. He can       |
| 150 |     | focus better and because he is into, formed a relationship with something, there is   |
| 151 |     | no separation anxiety because immediately he gets involved with something. And        |
| 152 |     | also then they've got to take responsibility for their learning where they finished   |
| 153 |     | their activity, they bring to the teacher, who will confirm that he has done it and   |
| 154 |     | do an assessment on an on-going basis all the time. He then goes to the activities,   |
| 155 |     | where three are compulsory and he can manage his time there, as much time he          |
| 156 |     | wants to spend there with each one and only once he has completed the                 |
| 157 |     | compulsory activities, he is allowed to go into free play.                            |
| 158 | I   | And how long is this free-play approximately?   |
| 159 | P11 | Right, depends on how long the child wants to work at, some children will spend       |
| 169 |     | an hour to one hour and half at the creative activities. Others, will rush through it |
| 161 |     | but then there is the teacher-aide, we also have the privilege of having a teacher-   |
| 162 |     | aide in each class, which will also keep tabs on them and will say, look, he's        |
| 163 |     | rushed the work or bring him back and that is his best work. We do encourage          |
| 164 |     | the children to produce their best. It might not be the best in the class but their   |
| 165 |     | own personal best. Have they tried their hardest?                                     |
| 166 | I   | Okay.   |
| 167 | P11 | And that will take us, they start creative activities from eight o'clock and it will  |
| 168 |     | take them up to quarter past nine, twenty to nine.                                    |
| 169 | I   | And today, the free-play was mostly educational toys that they had engaged with?      |
| 170 | P11 | Yes.  |
| 171 | I   | Again puzzles?  |
| 172 | P11 | Those are there all the time. The educational games are available all day, every      |
| 173 |     | day.  |
| 174 | I   | But something that interest me very much was the maths game that you set. Is it       |
| 175 |     | also compulsory before they go out?   |
| 176 | P11 | Yes.  |
| 177 | I   | Once they have finished their creative activities?                                    |
| 178 | P11 | Once they have finished their creative activities, they've got to do a maths game.    |
| 179 | I   | And they can choose?  |
| 180 | P11 | They can choose whatever maths game, they can choose or they can even do, by          |
| 181 |     | the end of the term, the last two weeks, we say, they can do a reading game as        |
| 182 |     | well because a lot of my children now, start to read. It is basically the same thing, |
| 183 |     | they have mastered the maths game, so we know, we don't just let them trolley on      |

|     |     |  |
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| 184 |     | doing the same thing, if they have done it. There must be a certain amount of          |
| 185 |     | stimulation, challenge. So once they've done it, they take their name, they read       |
| 186 |     | their name that's hanging up, they take it and post it in the tweetie box, which is    |
| 187 |     | that little birdie box, and they can actually go and have [unclear] where I can have   |
| 188 |     | a look at the treasure box and choose a little treasure sweet, which is a little sweet |
| 189 |     | with a letter on it. And they've got to show and tell me the letter they have          |
| 190 |     | chosen.  |
| 191 | I   | Okay, okay. Gits, there was in this daily programme, when I went through it for        |
| 192 |     | me strange things. For instance, on Mondays, they've got a formal drawing              |
| 193 |     | activity. What's that? Because, what I have noticed in your class, were that most      |
| 194 |     | of your learners were given a lot of time to, for free-choices. To make their own      |
| 195 |     | free-choices, to be creative, to do their own individual creativity and it was very    |
| 196 |     | much learner-centred, with you, more in a support, guidinng role. But this formal      |
| 197 |     | Drawing ...  |
| 198 | P11 | Right, let me explain to you what it is. At the beginning of a focus of inquiry,       |
| 199 |     | which is, we've been doing insects in spring. What we did, we all sit at our tables    |
| 200 |     | and we say, let's look at this, how are we going to draw it? We talk about what        |
| 201 |     | something looks like, and we break it into geometric shapes, because then there is     |
| 202 |     | the educational point of it and what shape do you see in a bee? And we talk about      |
| 203 |     | the head and the foraks and the [unclear] because they are not only doing vocab        |
| 204 |     | building and vocab development but they see how they, when they can see                |
| 205 |     | something, how they can put it in shapes to help them draw it.                         |
| 206 | I   | Okay, okay.  |
| 207 | P11 | So that's why it is called formal drawing.   |
| 208 | I   | Based on the theme and actual showing them more to start identifying the shape,        |
| 209 |     | how many legs?   |
| 210 | P11 | And the perceptual value, because if you just say, draw a bee, they say I can't.       |
| 211 |     | So, we dicet it, we break it into pieces. And that's how we say, draw a circle,        |
| 212 |     | where are we gonna draw it? We draw it in the middle of the page .And then we          |
| 213 |     | say, what shape is the wings? What can we, what shape can we, there's no right         |
| 214 |     | or wrong, we can use a triangle shape, we can use an oval shape, we can use a          |
| 215 |     | hexogen shape or whatever shape you want to use, but how they see it. But it           |
| 216 |     | helps them if you break it into pieces and it also help them tomorrow, when we         |
| 217 |     | paint it. They can just think, what did we say it looked like?                         |
| 218 | I   | So actually you, what came out for me, with your explanation but what I've also        |
| 219 |     | seen with you, you are actually trying to teach them the skills of how to think,       |
| 220 |     | how to analyse something, take it away and bring it back together as well as what      |
| 221 |     | is the sequence.   |
| 222 | P11 | That's right.  |

|     |     |  |
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| 223 | I   | That you are bringing in there.  |
| 224 | P11 | That's right. I just believe that children have to be, they've got to have this        |
| 225 |     | thinking skill because you are living in an instant world where you live. Parents      |
| 226 |     | no longer allow their children even to think or choose. It is easier for me just to    |
| 227 |     | say this is what you've got to do and this is how you do it. You know, even with       |
| 228 |     | my puzzles, I've got, what, twenty-six puzzles, they can choose which puzzle, I        |
| 229 |     | am not, you know, saying, you've got to do this puzzle. They know they only            |
| 230 |     | built each puzzle twice. And that we pick up from their assessment, they've got        |
| 231 |     | to choose something else. And it is exactly the same with all my activities.           |
| 232 |     | Everybody gets the same raw materials but it is up to them to choose and make          |
| 233 |     | what they want to make. That is creativity.  |
| 234 | I   | Okay, I want to come back to the thinking skills and I really notice it, right         |
| 235 |     | through your day, but especially with your show and tell and your story time and       |
| 236 |     | even in your music, is that you ask them open questions, what, how do you, very        |
| 237 |     | much on feelings nè? The emotional, I have seen you asked that quite a lot, but        |
| 238 |     | what would you think will happen if this, if we didn't fly off or what ever? But       |
| 239 |     | just give me your background, were you ever specifically trained on thinking           |
| 240 |     | skills?  |
| 241 | P11 | Yes, we were. That was very strong in our, in my training, that you use open-          |
| 242 |     | ended questions. And there's no right or wrong. And I think that's what ties up        |
| 243 |     | so nicely with the Outcomes-based, I'm actually for it to a certain extent, because    |
| 244 |     | I believe that it all teaches children to think. And as soon as you say no, children   |
| 245 |     | tend to withdraw. And if they realize that I have value, you know, our main ethos      |
| 246 |     | at H is to build a confident child. IQ and all, how clever and if you come first in    |
| 247 |     | the class, means nothing to me. But if you are confident, you can take on the          |
| 248 |     | world. And that's where confidence comes, you do have value, no matter what            |
| 249 |     | you say, it has value. And that's why, using open-ended questions, give the            |
| 250 |     | children opportunities not to be scared to actually give, bring their little part      |
| 251 |     | forward. And to answer questions. 'Cause as soon as they know it is right or           |
| 252 |     | wrong, they are going to be nervous to be wrong and belittled by the rest of the       |
| 253 |     | class. So it's all got to do with personal values and I didn't do it today, but as you |
| 254 |     | saw my value tree?   |
| 255 | I   | Yes, I did. It's lovely.   |
| 256 | P11 | I have a value tree and we discuss those values, what a value means.                   |
| 257 | I   | Okay, okay. I just want to ask something else, the other grades, are they also do      |
| 258 |     | the same theme?  |
| 259 | P11 | The two senior grades, we work on the same basis.                                      |
| 260 | I   | Okay.  |
| 261 | P11 | The open framework. The junior class I believe still need the traditional. They still  |

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| 262 |     | work on traditional, the only difference is that we have moved their puzzle time to |
| 263 |     | be in the beginning of the day and then they have their whisper time, which is      |
| 264 |     | their book time, at the end of the day.   |
| 265 | I   | You said whisper time, I like the way you call this stuff. Free-play, morning ring, |
| 266 |     | formal drawing, snack time, music ring, free-play, show and tell time, home time,   |
| 267 |     | that's story time and home time, it's lovely. But why I am asking you about the     |
| 268 |     | other classes, because it comes back to me, about the exploration and the           |
| 269 |     | discovery that happens during outside free-play. Two boys and a little girl         |
| 270 |     | discovered, what is it, 'n duisend poot?  |
| 271 | P11 | Earthworms.   |
| 272 | I   | Earthworms and duisend pote.  |
| 273 | P11 | Yes, yes. The caterpillars.   |
| 274 | I   | The caterpillars and they came to show me. And immediately they said, Look at       |
| 275 |     | my worms, they are not the same. And I was wondering, where did it come             |
| 276 |     | from? Did you lay in your discussions, the foundation and then they went out,       |
| 277 |     | through their play and discovery, they discovered this.                             |
| 278 | P11 | Our Units of Inquiry in each class are very important. Because that basically, are  |
| 279 |     | from where you work. And you know, the children, their lives evolve around          |
| 280 |     | that. You know, and they take that home and it is a huge learning tool. It's a      |
| 281 |     | huge learning tool. And I don't believe any school can, any class can function, if  |
| 282 |     | you don't have a core. Because that's your core you work around. You know if        |
| 283 |     | you just grab a pie in the sky, it does not make any sense for a child. You've got  |
| 284 |     | to see the thing in totality, break it apart, bring it back together.               |
| 285 | I   | That's right. I just want to see if there is something else here, okay I've ... You |
| 286 |     | brought in things that is actually a bit, sometimes, controversial. For instance,   |
| 287 |     | you brought in Letterland, you've got a Letterland. You've got also a, for today    |
| 288 |     | you had the, what did you call it, number games.                                    |
| 289 | P11 | Number games.   |
| 290 | I   | Number games where you do through a playful way, based on your theme again,         |
| 291 |     | maths concepts. And you focused on counting and building up and breaking            |
| 292 |     | apart.  |
| 293 | P11 | That's right.   |
| 294 | I   | You also showed me how lovely your number line is. May I ask, if you think of       |
| 295 |     | your numeracy concepts and more specifically, your learning outcomes and            |
| 296 |     | assessment standards, do you feel you cover all the numeracy assessment             |
| 297 |     | standards in a year?  |
| 298 | P11 | Yes, I do. Some of them I cover more than once. The more difficult ones, you        |
| 299 |     | know we must bear in mind that a lot of these children have already covered those   |
| 300 |     | concepts and have already internalized it. So the more difficult ones, at the       |

|     |     |  |
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| 301 |     | moment we, this term is halving.   |
| 302 | I   | Ja.  |
| 303 | P11 | Halving and doubling and things like that. So, those will continue because a lot     |
| 304 |     | of those children have not internalize them. So we will continue with them. But      |
| 305 |     | ja, definitely, some of them have to be double over, have to go for two terms.       |
| 306 |     | Because I work on a termly, where I work out my assessment and my LO's for           |
| 307 |     | the term, that these are the ones I am homing in on.                                 |
| 308 | I   | Okay. And that will also be your assessment task and all that.                       |
| 309 | P11 | That's right.  |
| 310 | I   | I just want to, there is something else also here, let me just see what I've written |
| 311 |     | here, okay, Letterland, Brain-gym I saw you covering today. Okay, is there           |
| 312 |     | anything else under content that you would like to discuss with me?                  |
| 313 | P11 | Even my Letterland, is linked with your theme.                                       |
| 314 | I   | Ja.  |
| 315 | P11 | You know, when we did, I am just trying to think, when we did Wild Animals, we       |
| 316 |     | did Zigzag Zebra. So everything is linked. No matter what it is, you can always      |
| 317 |     | find a link. It's just so easy, you know. I always say to my children, I say you     |
| 318 |     | can look for any story in the Bible and you will find it.                            |
| 319 | I   | Ja [laughter].   |
| 320 | P11 | You know and they will say, they want one about frogs and I told them the story      |
| 321 |     | about Pharoa and frogs. So they know that there's a link. Whatever they are          |
| 322 |     | doing, there is always a link.   |
| 323 | I   | I just want to come back to your maths games you had.                                |
| 324 | P11 | Yes.   |
| 325 | I   | It was interesting for me that some of the games the learners had, were made from    |
| 326 |     | ordinary, you made it yourself. Backs of boxes that you covered, almost like a       |
| 327 |     | domino cards put down there.   |
| 328 | P11 | That's right. Those are the inners of, when you go and buy your sheets from          |
| 329 |     | Sheet Street you know, those card board inners, then we just [unclear] them up.      |
| 330 |     | Because they are actually nice and strong.   |
| 331 | I   | You don't always need to have this expensive things.                                 |
| 332 | P11 | No!  |
| 333 | I   | Which was for me very interesting was the card game and most children play           |
| 334 |     | cards with their families and how you brought that in, also as a maths game, to      |
| 335 |     | match and to count with.   |
| 336 | P11 | From next term, they start learning to play Rammy. They are already playing          |
| 337 |     | Snap but they are actually ready to start playing card games.                        |
| 338 | I   | Ja. For me, to come back to the cards, is, well you had a display at the back and    |
| 339 |     | also the cards.  |

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| 340 | P11 | On the wash lines?  |
| 341 | I   | On the wash line on a card format. But how you integrated that with Life                                  |
| 342 |     | Orientation, the Bible Story. The <i>I</i> stands for, I can't remember.                                  |
| 343 | P11 | One, we've only got one God, we worship one God.  |
| 344 | I   | That's right. And so you build on until the Queen and the King.   |
| 345 | P11 | Right until the end.  |
| 346 | I   | And that was for me, actually very.... Because learners know those cards, they                            |
| 347 |     | are familiar with that. That was for me actually very nice that you did it. Okay,                         |
| 348 |     | Participant 11, let us quickly look through here. If you feel you want to add more                        |
| 349 |     | to it, and this is what the group said. Under <i>Content</i> we spoke about <i>colours</i> ,              |
| 350 |     | <i>doubling</i> , which we did today, <i>colours</i> you also did lovely with the learners                |
| 351 |     | having to choose those pegboards, <i>constructing</i> , very nicely came out with your                    |
| 352 |     | nuts and bolts table, <i>numbers</i> you did, <i>counting</i> you did a lot, <i>sequencing</i> you did    |
| 353 |     | also, <i>shapes</i> , <i>data handling</i> we didn't do, yes we did with your weather.                    |
| 354 | P11 | Ja, with weather.   |
| 355 | I   | Okay, <i>mathematics</i> more the maths games, <i>mass</i> we did cover today nè?                         |
| 356 | P11 | They did that in the sandpit, they do a lot of mass in the sandpit.                                       |
| 357 | I   | Okay, then you belief in <i>concrete apparatus</i> ., your <i>patterns</i> came in through,               |
| 358 |     | <i>estimation</i> also in the sandpit?  |
| 359 | P11 | Also they had to estimate where was more and where was less in the story, how                             |
| 360 |     | many do you estimate, how many ladybirds were there?  |
| 361 | I   | Okay, that's right. <i>Sorting</i> , <i>more</i> , <i>less equal</i> came out very nice. <i>Balancing</i> |
| 362 | P11 | We did not do balancing today.  |
| 363 | I   | Although I was very impressed with your outside play, with the big balls you had,                         |
| 364 |     | what is that? Is that ...?  |
| 365 | P11 | It's a float.   |
| 366 | I   | A float? You've got two or three of them and how children spontaneously                                   |
| 367 |     | balanced on it. But you said, you brought in ball games for a specific reason.                            |
| 368 | P11 | We brought balls in. What we found, especially with the boys. You know, they                              |
| 369 |     | are watching a lot of this kick-boxing, wrestling WWF, BENTEN{?}. All these                               |
| 370 |     | kids' programmes that's got so much violence in. And they were bringing that                              |
| 371 |     | violence to school. And they were kicking each other, and kick-boxing. And we                             |
| 372 |     | said, no more. But we have to give them something to get rid of this. So we                               |
| 373 |     | brought balls in that they can have whatever balls, however many balls they want                          |
| 374 |     | per day. So we brought them in. So they can kick on to the roof, they catch it as                         |
| 375 |     | it comes.   |
| 376 | I   | Ja, lovely.   |
| 377 | P11 | So we've got amazing ball skills. I personally have got a thing about ball skills                         |
| 378 |     | because I believe that if they don't go to school with those ball skills, they are not                    |

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| 379 |     | going to learn it at school. Because, number one, mom and dad no longer play                |
| 380 |     | balls with children, they only get home at five o'clock. So, it is up to us to equip        |
| 381 |     | them with those ball skills. And they are not only going to school with those ball          |
| 382 |     | skills now, but they are also managing their emotions and we don't have                     |
| 383 |     | anymore. Now we have a lot of rugby being played, which is still an aggression,             |
| 384 |     | but positive aggression.  |
| 385 | I   | Ja, and you said, they even make their own rules?   |
| 386 | P11 | They are making their own rules now. You know, they now are watching rugby                  |
| 387 |     | and realizing I want to be so and so. They are now also getting their heroes and            |
| 388 |     | their role-models are coming up. And we talk about those role-models. And if                |
| 389 |     | somebody gets a yellow card, we talk about why they got a yellow card.                      |
| 390 | I   | Again the values coming.  |
| 391 | P11 | Always the values coming.   |
| 392 | I   | And so much integration.  |
| 393 | P11 | Yes.  |
| 394 | I   | <i>Measurement, collecting</i> , you also did with the cards and when they came to the      |
| 395 |     | Show and Tell, to collect their stuff, <i>Foundation for later abstract thoughts and</i>    |
| 396 |     | <i>visualizing</i> is why we do maths, all these content, and <i>think and reason</i> which |
| 397 |     | came out very strongly. Anything you want to add to this group? Or do you feel              |
| 398 |     | it is more or less covered?   |
| 399 | P11 | I think it is more or less covered. You know, I think there are some things that            |
| 400 |     | are more specific you low, but I think on broad basis, that basically covers them           |
| 401 |     | all. And you know, a good thing is <i>independence</i> . You know to foster                 |
| 402 |     | independency in these children. You know, I no longer say to them, it is time to            |
| 403 |     | go to the toilet. It is time to wash your hands. They know by this stage, you               |
| 404 |     | don't have dirty hands, so they wash their hands. So it is <i>fostering independence</i>    |
| 405 |     | all the time. You know, it's not so much strain now. The two senior classes, if             |
| 406 |     | for some reason, the teacher is not there, if she is sick, I actually don't have to         |
| 407 |     | bring someone else in. Because between the teacher-aide and the children they               |
| 408 |     | are absolutely fine. And I think that in itself tells a story.                              |
| 409 | I   | Ja, the responsibility and the safety. They know what is going to happen every              |
| 410 |     | time.   |
| 411 | P11 | Absolutely, they know nothing changes and it is, you know, like, as you have                |
| 412 |     | picked up, they say why are we coming to the piano to sing today. Because today             |
| 413 |     | they actually, normally sing on the mat. So they know what is expected of them.             |
| 414 | I   | Okay. Goed.   |
| 415 | P11 | And I also want to say that they get sent home, a letter gets sent at the beginning         |
| 416 |     | of a Unit of Inquiry. To say, right, these are the outcomes that we expect from             |
| 417 |     | your children, and what we'll be covering. So the parents can also double up                |

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| 418 |     | from their time. They can say, right, often parents will say, what did you do at          |
| 419 |     | school?   |
| 420 | I   | And they will say?  |
| 421 | P11 | Nothing.  |
| 422 | I   | Just played.  |
| 423 | P11 | And I said to my parents, don't ask those sort of questions. Say, what did you            |
| 424 |     | learn about? They know, learning about the butterfly of the bee, what did you             |
| 425 |     | learn about the ladybird today. What did Aunty T tell you about ? And that                |
| 426 |     | actually re-inforces it and that gets them off from a task. It's basically a kick-off     |
| 427 |     | or a sent-off for them.   |
| 428 | I   | Ja, but it's wonderful. It brings back the home and the school.                           |
| 429 | P11 | I just say home-school learning and that's why the Show and Tell also, because            |
| 430 |     | the parents also know that, because everyday there are five children and they are         |
| 432 |     | different five children. But every Monday, it is that child's Show and Tell.              |
| 433 | I   | But didn't you find with the Show and Tell, that the kids start to have a                 |
| 434 |     | competition, because one of the little girl's mom went overseas and she brought           |
| 435 |     | her all that stuff. Don't you think that another child would feel, but I also must go     |
| 436 |     | now to the shop and buy something?  |
| 437 | P11 | No, because for the simple reason that I never make anything more important               |
| 438 |     | than what she had than the boy that just brought his bicycle. It's not on, no, I          |
| 439 |     | don't find at all that there is anything like that.                                       |
| 440 | I   | And you don't prescribe what they are coming with?  |
| 441 | P11 | No, they can bring, I try and say to them, if you can bring me something that we          |
| 442 |     | are talking about, that will be great. But you can bring me what you want to              |
| 443 |     | bring.  |
| 444 | I   | Because that is what is at that stage important to them.                                  |
| 445 | P11 | Ja, what is at that stage important to that child.  |
| 446 | I   | Okay, let us just look at the descriptive paragraph. <i>Numeracy includes the acts of</i> |
| 447 |     | <i>identifying, constructing and building and reproducing of</i> and then we named all    |
| 448 |     | those things, <i>by the Grade R teacher in a concrete form in order to lay a</i>          |
| 449 |     | <i>numeracy foundation for later abstract thinking and reasoning.</i> Do you agree        |
| 450 |     | with that?  |
| 451 | P11 | Yes.  |
| 452 | I   | Okay, our next theme is about, what the group named <i>Enrichment and remedial</i>        |
| 453 |     | <i>activities</i> ?. You have already named, acknowledge or said to me that you've got    |
| 454 |     | about three learners that you know, that have definitely got barriers to learning,        |
| 455 |     | that are ADHD?  |
| 456 | P11 | I would say so, ja. I had them assessed. I personally belief two are not ready for        |
| 457 |     | school, but had them assessed by the school-readiness clinic and they say, no,            |

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| 458 |     | they are ready to go to school. So then I questioned my standard. Is my standard     |
| 459 |     | not too high? You know when I am saying, oh oh, there are going to be a              |
| 460 |     | problem here, and I am told they are fine. Absolutely fine.                          |
| 461 | I   | The school-readiness clinic, where's that place?                                     |
| 462 | P11 | LD. She's a school readiness tester in Grahamstown. She does a lot of school-        |
| 463 |     | readiness, you know. So that bothers me a little bit but if I look around, yes,      |
| 464 |     | maybe our standard is higher than maybe your average, you know, normal run of        |
| 465 |     | the mill pre-school. Maybe, I don't know. But for those children, like the one       |
| 466 |     | little boy who really has a problem, I let him. Cause I don't say, I say the other   |
| 467 |     | children bother him. I don't say he can't concentrate. And that's why when           |
| 468 |     | another little one wants to help him, I let him come and help him. But as I say,     |
| 469 |     | they have just got major focus problems. Major focus problems, that are their        |
| 470 |     | barriers. On a one-to-one, they are fine. That's why I also think that maybe the     |
| 471 |     | school-readiness tests, it was a one-to-one , maybe that's why they scored higher    |
| 472 |     | than what they would have done in a group.   |
| 473 | I   | Okay, and you would have noticed how they work in a group and how they               |
| 474 |     | emotionally cope?  |
| 475 | P11 | Mmm.   |
| 476 | I   | With certain things that don't see in a normal testing situation?                    |
| 477 | P11 | Absolutely. You know, we see in five years a lot of these children, four of my       |
| 478 |     | children have been with me since they were three months old.                         |
| 479 | I   | Shame, like that other baby.   |
| 480 | P11 | Yes. She can't pick up in an hour what we've picked up for six years. But            |
| 481 |     | anyway, I think you know, in a way, it's also I'm covering myself. You know,         |
| 482 |     | because I've found often that your Grade One teacher blames your Grade R             |
| 483 |     | teacher. Often they say that, no, she did not do the foundation, she did not do ...  |
| 484 |     | And that's why I am picking up problems now. And I just felt that by this way I      |
| 485 |     | am covering myself. I've said I did have maybe some thoughts that I was worried      |
| 486 |     | about but if they say they are ready, that's fine.                                   |
| 487 | I   | It's up to them.   |
| 488 | P11 | It's up to them now, yes. You know, I find a lot of parents believe these days that  |
| 489 |     | if they send their children to Grade R, they don't have to do anything. That is the  |
| 490 |     | perception.  |
| 491 | I   | Okay, you said now, learners with barriers, but what about learners who are          |
| 492 |     | gifted?  |
| 493 | P11 | E, we belief that every child is gifted to a certain extend, in a certain area. It   |
| 494 |     | might not be in every area but in a certain area. And it is up to me, as their Grade |
| 495 |     | R teacher, or [unclear]. And that is the reason why we changed our whole routine     |
| 496 |     | and we went on to the Open Framework Model.  |

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| 497 | I   | And you find that child where he is and you give more.                                    |
| 498 | P11 | You give more. Absolutely, you give more and if I know what I put into the                |
| 499 |     | class, [unclear]. You know, those children who can [unclear] and those who                |
| 500 |     | can't, it's fine. They will do it in Grade 1. But I am not going to keep who can,         |
| 501 |     | back. But I think, people think, often children with barriers to learning have only       |
| 502 |     | learning problems but often your gifted child can also cause a problem if they are        |
| 503 |     | not stimulated. So that is quite important to be, made sure you cater for                 |
| 504 |     | everybody.  |
| 505 | I   | And you know the children. You know what they can, they came from baby to                 |
| 506 |     | you.  |
| 507 | P11 | Absolutely. A lot of time I know the children better than their own parents.              |
| 508 | I   | That is sad.  |
| 509 | P11 | It is very sad. But you know, it's the sign of the times.                                 |
| 510 | I   | Children with emotional problems?   |
| 511 | P11 | Those are the children with emotional problems. They are basically one parent             |
| 512 |     | children. And my class hasn't that many. The middle class has got a lot, got              |
| 513 |     | 40%.  |
| 514 | I   | 40% .   |
| 515 | P11 | Ja, my class, the two children who are actually giving me the biggest problems,           |
| 516 |     | are the ones from single families.  |
| 517 | I   | I just want to come back, as you said, you have done a lot of courses as well. Do         |
| 518 |     | you feel you are comfortable to deal with these barriers?                                 |
| 519 | P11 | Yes, yes, yes.  |
| 520 | I   | So you feel you are equipped?   |
| 521 | P11 | Yes.  |
| 522 | I   | Let's look at what the group said. <i>Enrichment activities can include rhymes,</i>       |
| 523 |     | <i>creative activities, finger poems, beads, dominoes, movement, integration , nature</i> |
| 524 |     | <i>tables and nature walks, songs, games, blocks, puzzles [unclear].</i>                  |
| 525 | P11 | And also, a lot of one to one contact is crucial with those children. Not just group      |
| 526 |     | work.   |
| 527 | I   | Ja, ja. I agree with you. To build their confidence.                                      |
| 528 | P11 | And to make them feel they are accepted.  |
| 529 | I   | Accepted but also to ...  |
| 530 | P11 | try and remediate. Absolutely. And also, I think, you know, when you [unclear]            |
| 531 |     | and because I am sitting with them all the time. Because they also got to learn to        |
| 532 |     | work there. [unclear] I won't sit there, you'll do all the outside pieces [puzzles]       |
| 533 |     | and then I will come and help them.   |
| 534 | I   | They first got to do the framework?   |
| 535 | P11 | Yes, do the framework, but I am actually hovering during, I am not sitting with           |

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| 536 |     | them. They must learn to develop. Because what is going to happen in Grade 1?             |
| 537 | I   | Just to come back to your creative activities, now that is your hovering. It is a         |
| 538 |     | nice way to put it. I found that some teachers, particular in creative activities,        |
| 539 |     | they sit with the learners with the main activity and let all the other tables, they do   |
| 540 |     | it but only on the main table. You don't. You give attention to all the tables and        |
| 541 |     | where that child is working.  |
| 542 | P11 | No, we are fortunate in that, because of our system. We don't have all 25                 |
| 543 |     | working together. Which takes a lot of pressure off the teacher and allows the            |
| 544 |     | teacher to assess better. Your assessment I just feel, you can assess better if you       |
| 545 |     | have got half of your children working, it makes it so much ... And also, you             |
| 546 |     | cannot, there is now ways you can see 25 children working at once. It is less             |
| 547 |     | stress on the table and also the children learn, when you are finished I take my          |
| 548 |     | paper and throw it away, because I've got to respect that my friend is coming to          |
| 549 |     | work here now. And that also teaches, I feel quite strong about values. Respect,          |
| 550 |     | don't leave the table in a mess. If we keep it nice and neat for your friend, they        |
| 551 |     | will come and work.   |
| 552 | I   | What was for me very nice, is, what I've seen in your class, especially with the          |
| 553 |     | free-play inside and outside, that the learners played. Some learners wanted to do        |
| 554 |     | creative activities, but quite a lot focused on the blocks. There were three boys,        |
| 555 |     | who built a beautiful army and the girls played in the fantasy corner. A lot of           |
| 556 |     | them played outside but for me the play...I have found that learners are more kept        |
| 557 |     | busy and instructed to deliver work products and that the play is being lost. And I       |
| 558 |     | didn't find it with you.  |
| 559 | P11 | I find it very important that children [interrupted by a child] You've got to take        |
| 560 |     | responsibility for your happiness and everybody else's happiness in your class.           |
| 561 |     | And it saddens me.  |
| 562 | I   | If you don't enjoy it, why are you here? I jump now with the discussion, to the           |
| 563 |     | next one, which is about <i>Feelings</i> . And there you said, <i>the teacher must be</i> |
| 564 |     | <i>enthusiastic, must be in control, make it inviting</i> . This morning, your class was  |
| 565 |     | set out, even now, <i>organized</i> . You said to me that your class is your passion?     |
| 566 | P11 | You know, E, I just belief that if, as a pre-school teacher, you have to got to be, to    |
| 567 |     | keep a step ahead. Because if you are not a step ahead, then there is discipline          |
| 568 |     | problems. And if you are having discipline problems you've are going to have              |
| 569 |     | behavior problems. But you've got to be a step ahead. You cannot [unclear] .              |
| 570 |     | You must come in the morning, knowing exactly what you are going to do.                   |
| 571 |     | Know what your plans are for today? What are you going to do and how are you              |
| 572 |     | going to do it? But in that, make way and make time [unclear] because the                 |
| 573 |     | educational situation happens only once. You can't go back to that. And that's            |
| 574 |     | why you've got to be organized.   |

|     |  |   |
|-----|--|---|
| 575 | I  | But with organizing, don't you feel, have you ever felt burnt-out?                      |
| 576 | P11  | No, I have never felt burnt-out in that I can't, you feel burnt-out, I believe when     |
| 577 |  | there is nothing new to you. When you feel, I just can't take in anymore. If you        |
| 578 |  | feel you are on top of your game, you might get tired, but you don't get burnt-out.     |
| 579 | I  | Okay.   |
| 580 | P11  | No, I don't, we were talking about teachers' portfolios. My portfolio, this is what     |
| 581 |  | we did when we did Eskimo's and I just add to it, all the time. We never do the         |
| 582 |  | same theme again. Next year you will do this Unit of Inquiry, but you will              |
| 583 |  | approach it in a different way, because you've got different kids. You can't do         |
| 584 |  | the same thing every year.  |
| 585 | I  | Slowly [show examples of portfolio prep] Your apparatus, that is something I've         |
| 586 |  | picked up today as well, you vary your apparatus style, sometimes you use three-        |
| 587 |  | dimensional apparatus and sometimes you just use a story book, you just ask them        |
| 588 |  | to listen.  |
| 589 | P11  | I think that the biggest thing with a story is, I believe in story time that your major |
| 590 |  | focus is listening. So be careful that there is not too much visual, when your          |
| 591 |  | outcome is a listening activity. But you need to keep them there.                       |
| 592 | I  | Their attention?  |
| 593 | P11  | Ja.   |
| 594 | I  | And that has got to do with your voice and inviting them to answer questions?           |
| 595 | P11  | Absolutely. And I just believe that it does not cost you, that's a bottle and these     |
| 596 |  | were the questions we asked them?   |
| 597 | I  | You just spoken about mind-map. Tell me, we keep on jumping back to the                 |
| 598 |  | content. With your creative activities today, the focus was on mind-map. Tell me        |
| 599 |  | what is the aim of the mind-map?  |
| 600 | P11  | The mind-map, what I've learnt over the years are that the children are not taught      |
| 601 |  | how to learn when they get to formal school. And so what I thought, what I am           |
| 602 |  | hoping, that this will be, this is the objective, how are we going to know that this    |
| 603 |  | is a picture about the farm? So the children came up with the idea, let's put a         |
| 604 |  | scarecrow, we don't get a scarecrow in town. So, therefore we get a scarecrow on        |
| 605 |  | the left of the page. Right, let's talk about Spring on the farm, where can we see      |
| 606 |  | spring? They told, they came up with the idea of all the animals, the hen house, the    |
| 607 |  | vegetable patch, the farm pond. That linked up with the week before when we             |
| 608 |  | spoke about frogs in spring. And we spoke about the orchard, and blossoms and           |
| 609 |  | having the arbour day. So that link with arbour day and we made blossoms on             |
| 610 |  | our tree. So everything that is linked, came from them. And then I ask the why,         |
| 611 |  | the where, what, how, those questions and then they got to take their posters           |
| 612 |  | home and they teach their parents about it. So we actually worked for two weeks         |
| 613 | on that poster. It is an on-going thing, that we are working on. |   |

|     |     |   |
|-----|-----|---|
| 614 | I   | It teaches them how to think?   |
| 615 | P11 | Absolutely.   |
| 616 | I   | And not just to put out stuff.  |
| 617 | P11 | [unclear] Anybody can teach a parrot to talk. Anybody but you've got to think             |
| 618 | I   | That's the most difficult one. Okay, let's come back to the <i>Feelings</i> . We spoke a  |
| 619 |     | lot about it. Let's just look what the group said and you can add to me.                  |
| 620 | P11 | {showing vision poster} What the child will know, think and feel, depend on you.          |
| 621 |     | You are the one that will choose the experiences he will learn from. What you do          |
| 622 |     | not offer, a child will not know. Now, that is our teachers' motto.                       |
| 623 | I   | The important role of the teacher, all the time.  |
| 624 | P11 | That is our teachers' motto.  |
| 625 | I   | Okay, goed. Let's look at what the group said. What you basically said, you               |
| 626 |     | must be <i>happy, encouraged, comfortable, fun</i> , and that I've seen a lot, especially |
| 627 |     | through your music activities, the bear and the bees.                                     |
| 628 | P11 | If we had time, the girls would have been bears and the boys bees.                        |
| 629 | I   | You turn the roles around. Okay, goed. <i>Sharing, language barriers, excitement,</i>     |
| 630 |     | <i>excited understanding and challenged.</i> Okay, what we've said with the               |
| 631 |     | descriptive paragraph, is that <i>It is important that learners are challenged for</i>    |
| 632 |     | <i>learning to take place even though the learner might feel insecure due to no prior</i> |
| 633 |     | <i>numeracy knowledge.</i> Okay, do you find that quite a lot? That they come to          |
| 634 |     | school with no prior numeracy knowledge?  |
| 635 | P11 | Not mine.   |
| 636 | I   | Not yours? Okay, <i>Therefore, to have a learner who is confidently engaging with</i>     |
| 637 |     | <i>numeracy activities, the role of the teacher is to be understanding, helpful,</i>      |
| 638 |     | <i>exciting to address the learners' language and numeracy barriers are vital. The</i>    |
| 639 |     | <i>teacher needs to assure that her presentation of numeracy activities are inviting</i>  |
| 640 |     | <i>and exciting</i>   |
| 641 | P11 | I do find that there is this one little black girl. She came in for the first time, this  |
| 642 |     | year. So the first term, I had to do all the numeracy in her language, in her home        |
| 643 |     | language. Only when she got the English vocab, she was comfortable enough to              |
| 644 |     | do it in. But I had to do it in her home language. I thought it was important that        |
| 645 |     | she internalized it in her home language. That's why I've got a problem with              |
| 646 |     | children who go straight from the township, isiXhosa, to the ex-model C schools,          |
| 647 |     | where they are taught in English or in Afrikaans. They do not get a chance to             |
| 648 |     | internalize in their mother tongue.   |
| 649 | I   | You know what we found, and that was especially in the NorthWest. We found                |
| 650 |     | that the learners in the Grade R classes, they were more like crèches to me. They         |
| 651 |     | were taught numeracy concepts in English and then they go to school where they            |
| 652 |     | were exposed to isiTswana and the learners couldn't grasp it. I hear what you are         |

|     |     |  |
|-----|-----|--|
| 653 |     | saying, the whole thing is, what you are introducing, must be in the home                  |
| 654 |     | language [unclear].  |
| 655 | P11 | Absolutely. Very definitely.   |
| 656 | I   | See, I've also had schools who said to me they introduce it in English, the                |
| 657 |     | language of LOLT. They don't go back or do code-switching in isiXhosa,                     |
| 658 |     | because they feel a new language is being learnt the best when you are only                |
| 659 |     | confronted with that language. For instance, she based her theory on this                  |
| 660 |     | Francaise, this is where you want to learn French, they don't speak at all English [       |
| 661 |     | unclear]. I feel you've got to lay a foundation of mother tongue and then build on         |
| 662 |     | it.  |
| 663 | P11 | You know, unfortunately this girl never heard any English at home. She only                |
| 664 |     | hears isiXhosa. So that's why it was important for me, and for her parents, they           |
| 665 |     | do not speak English. So that's why it is important she sees it in [unclear]. Now          |
| 666 |     | she flies.   |
| 667 | I   | And if she gets a problem, you revert back to isiXhosa. Okay, the role of the              |
| 668 |     | teacher <i>is to guide, support and to encourage</i> . I think we have covered that one in |
| 669 |     | detail. Let's just go to the one, we have skipped now. And that's the one on <i>in-</i>    |
| 670 |     | <i>service training</i> . Just tell me your perceptions and experiences on in-service      |
| 671 |     | training you had experienced.  |
| 672 | P11 | You know, I've got to be very honest. You know, I think, because of the training           |
| 673 |     | I've had, and because of the training I personally am responsible. I have attended         |
| 674 |     | courses ...  |
| 675 | I   | You said to me, you go daily on the Internet?  |
| 676 | P11 | I am a daily user, Uncle Google and I am best buddies [laughter]. You know, so,            |
| 677 |     | a lot I think, to me a lot of these, are a waste of time, personally. But I cannot         |
| 678 |     | look at all in-service training in that way because not everybody has been                 |
| 679 |     | privilege enough to have that training, do you understand? I also do feel, that a          |
| 680 |     | lot of the training should be more hands-on. You know, at the moment, we                   |
| 681 |     | actually need to say right, if you've got a teacher who is good at that, go and            |
| 682 |     | spend a day with her. And that, personally I find that I need to know what is              |
| 683 |     | another school doing. Not just pen and paper. And I think a lot of our training, our       |
| 684 |     | teachers, especially our township schools attend CSD. They do a great job, don't           |
| 685 |     | get me wrong. But, I had one of their teachers with me and I thought, o jene tog,          |
| 686 |     | you know. So, there in-service training they do need it. And for the people who            |
| 687 |     | have been formally trained, I belief, they don't need it.                                  |
| 688 | I   | It is again, a different need for different people, coming in here.                        |
| 689 | P1  | Totally.   |
| 690 | I   | Okay, if we, because you just said to me, you have been a lecturer [trainer] for a         |
| 691 |     | while, if you think of in-service training to the teachers, there are basically two        |

|     |     |   |
|-----|-----|---|
| 692 |     | groups of learning. From the first it was basically on planning and very much           |
| 693 |     | theoretical and abstract, that one. Then they had a course from, I can't remember,      |
| 694 |     | SANTS, some service provider, to whom they had to go, maybe once a month                |
| 695 |     | and where they were giving some courses. If you look at these, do you think there       |
| 696 |     | is any depth? Or is it almost like Level 1, right through. It might be a Level 4,       |
| 697 |     | but it is still the same.   |
| 698 | P11 | I do belief, that [unclear]. That we are actually not into the nitty gritty, it is very |
| 699 |     | Superficial.  |
| 700 | I   | We don't expose teachers to why are we having early childhood programmes.               |
| 701 | P11 | And you know where I found that, where, I have picked up there's a [unclear],           |
| 702 |     | they do planning, but to put that actual planning into practice. There, they don't      |
| 703 |     | see that they connect and I went to a workshop in Grahamstown at one of the             |
| 704 |     | schools, where they had all these outcomes and assessment standards, all over the       |
| 705 |     | walls, but I never saw it in practice. You know, where I can say, there's the           |
| 706 |     | activities, there's the work, but I couldn't see the correlation.                       |
| 707 | I   | Don't you think it is also very much teacher-centred when they plan these               |
| 708 |     | activities? Because they don't set it out for the learners' needs and learner-          |
| 709 |     | centredness. These concepts, they don't know how to bring it down. I hear what          |
| 710 |     | you are saying. I have seen a teacher controlling a whole movement ring. Never,         |
| 711 |     | ever taking the lead of one child who was standing outside [unclear]. She just          |
| 712 |     | threw the ball at one child and back.   |
| 713 | P11 | So it is teacher-driven and teacher-centred. That was a big thing in my training        |
| 714 |     | and I called it learner [unclear]. Everything must be learner-centred. And I don't      |
| 715 |     | know if you have picked it on, I do it now, thinking about it only now when you         |
| 716 |     | brought it up, different ways of shape, find a new way, that's a good way to, you       |
| 717 |     | know.   |
| 718 | I   | Again it comes to thinking skills and problem-solving. And even, to challenge           |
| 719 |     | the child just to go a bit further. Without letting him feel overwhelmed and that       |
| 720 |     | he couldn't, but to challenge him a little bit more.                                    |
| 721 | P11 | Coming back to in-service, I think the teachers, in a nutshell, need to put in          |
| 722 |     | practice what they've learnt. That's where there is a little bit of a gap.              |
| 723 | I   | Don't you think we also need in-depth? If I think of the in-service training that       |
| 724 |     | we have given, we touched on it in theory, but very little. You've got the learning     |
| 725 |     | styles, but we didn't role-play it out. Show us more how it can be done. I think        |
| 726 |     | that in a lot of cases, teachers just think, something else I am also very sad about    |
| 727 |     | at this stage, is that teachers lack mentors.   |
| 728 | P11 | Yes.  |
| 729 | I   | A teacher is being at one school, the only Grade R teacher. But she used to be a        |
| 730 |     | day mother but now she's into a programme. But she has not got enough                   |

|     |     |   |
|-----|-----|---|
| 731 |     | [unclear] to follow the school and the principal and the HOD of the Foundation            |
| 732 |     | Phase, are having different expectations. The teacher is actually lost. And I             |
| 733 |     | realize some mentoring[unclear] At your school, you've got a lot of, how many             |
| 734 |     | trained teachers do you have?   |
| 735 | P11 | I've got two formally trained. And I am formally trained. We are both trained at          |
| 736 |     | Barclay College which is wonderful because we both come with the same                     |
| 737 |     | background. And then I have two certificated teachers and the others are just             |
| 738 |     | moms who are trained through INTEC.   |
| 739 | I   | Okay, but you mentor them?  |
| 740 | P11 | All the time. On Wednesday, when I have the other lady that comes in for the              |
| 741 |     | mornings, it releases me to go and observe other classes and also to do some in-          |
| 742 |     | service training with the teachers.   |
| 743 | I   | I've got a lot of sympathy with these teachers. Before I was a subject advisor, I         |
| 744 |     | was at UNISA which is a very good institution but it was very theoretical. We did         |
| 745 |     | practical but it wasn't enough. When I started teaching, I felt I had no resources.       |
| 746 |     | But it taught me how to be creative. But sometimes I think I am lost. Am I on the         |
| 747 |     | right track? I wish there was someone who could just show me on this area. And            |
| 748 |     | this was before numeracy came in. When it came in, I was actually shocked                 |
| 749 |     | because how am I going to do it? Because I never had training on how to teach             |
| 750 |     | learners to read and how do you do maths with them. [unclear] yes, through play           |
| 751 |     | and games but never formally. I mean, even in your class, never before did you            |
| 752 |     | do two-digit.   |
| 753 | P11 | Never.  |
| 754 | I   | unclear]. Although it must still be in a play way. Because the Grade R is different       |
| 755 |     | to the Grade 1 class.   |
| 756 | P11 | You know, I just feel that, we must not take the aha away from Grade 1. And               |
| 757 |     | that's why, I personally, don't teach reading as reading. They can do their               |
| 758 |     | [unclear] where they look more at the picture than anything else. But to take the         |
| 759 |     | aha from Grade 1, is very sad. Because they must have, in Grade 1 I can read.             |
| 760 |     | They must have that excitement. I don't want to take that away.                           |
| 761 | I   | [unclear] Again to be learner-centred and how do you teach. Okay, basically               |
| 762 |     | what we said in a group, there were two things that came out, a positive and a            |
| 763 |     | negative side. The positive side said <i>Sometimes excited, to be open in mind, not</i>   |
| 764 |     | <i>alone, worth it, relevant, very keen to attend, beneficial.</i> The negative side said |
| 765 |     | <i>Looking for more stimulation, sometimes I'm scared.</i>                                |
| 766 | P11 | You know what I think you must do with negative, and I think I was responsible            |
| 767 |     | there, is that we must not forget that only 10% of us, feel like that. We must not        |
| 768 |     | forget, it is almost unfair to say the negative part because a lot more people feel       |
| 769 |     | positive about it.  |

|     |     |   |
|-----|-----|---|
| 770 | I   | Yes, but you need the negativeness to be the checks and balances. Because I find      |
| 771 |     | that people keep on criticizing themselves, because they haven't a benchmark.         |
| 772 |     | They will say, this is their first in-service training, it is great. But they haven't |
| 773 |     | been exposed to other courses [unclear]. But in that course, everything was           |
| 774 |     | excited, I can remember everything. And this is why we need people to assist on       |
| 775 |     | critiquing [unclear].   |
| 776 | P11 | You know E, I will be quite honest, I often felt, I would like someone to come        |
| 777 |     | help me. Let's find [unclear]. I can't do everything right. You know, maybe           |
| 778 |     | that's why I am [unclear]. I go to classroom management and feel I'm doing            |
| 779 |     | alright. I go to disciplinary in the classroom. I go to the [unclear] of learning,    |
| 780 |     | because I just feel, if I am not feeling myself.                                      |
| 781 | I   | [unclear]   |
| 782 | P11 | I try to be on the cutting edge all the time.   |
| 783 | I   | But the one thing is, what people also say to me, and that comes back to the          |
| 784 |     | feelings, how can you expect me to be like... I haven't time for planning, it         |
| 785 |     | takes too much. How do you expect me to be at that course? First of all, nobody       |
| 786 |     | is going to pay for me and secondly, I haven't got access to Internet.                |
| 788 | P11 | You know E, I don't belief in that. If you want time, you will make time. That's      |
| 789 |     | a weak excuse and I don't accept it. [laughter] I'm sorry, I don't take that from     |
| 790 |     | anybody. If you really want to do something, you will find time to do it.             |
| 791 | I   | I agree. It's just ... I agree. How can you have the same theme, the same             |
| 792 |     | activities, week after week after year after year?                                    |
| 793 | P11 | You know E, It's frightening, but some of my Grade R learners who are now in          |
| 794 |     | Grade 1, are doing exactly the same what my sons have been doing in Grade 1.          |
| 795 |     | The poor teacher! How she must be feeling! [laughter]                                 |
| 796 | I   | With me the whole thing, you go into a school, and there is an ambiance, an           |
| 797 |     | atmosphere and you can see something is taking place [unclear]. It's so sad. Are      |
| 798 |     | there any themes you feel you would like to include here?                             |
| 799 | P11 | Where would you put my values in?   |
| 800 | I   | Under content?  |
| 801 | P11 | Ja. Those are my drivers, those are my drivers for my classroom.                      |
| 802 | P11 | I would say, ja. I would say my major driver in my class is the child.                |
| 803 | I   | Then we should have had it here, [theme], that's why I was asking you.                |
| 804 | I   | My child as the child.  |
| 805 | P11 | Child-centred.  |
| 806 | P11 | That to me, is my driver. Look at my children, what do you want? Tell me what         |
| 807 |     | do you want? What are your needs?   |
| 808 | I   | Okay, they won't be able to say what their needs are but                              |
| 809 | P11 | But you identify it. Look, for me, to get into a class of priviledge children, being  |

|     |     |   |
|-----|-----|---|
| 810 |     | here 5, 6 years. Something that you give [unclear]. I have just never been to a                   |
| 811 |     | school in the township.   |
| 812 | I   | `Yes on the one hand but [unclear]. You've got to include ...                                     |
| 813 | P11 | That's why I am saying, but my majority is priviledge.  |
| 814 | I   | And stimulated.   |
| 815 | P11 | Ja. She has become now priviledge and stimulated. Her mother has raised the                       |
| 816 |     | game. Which is wonderful because I have not effected her but also affected the                    |
| 817 |     | whole family .I would definitely say that the child, is one there or unless we put                |
| 818 |     | him ...   |
| 819 | I   | Let's see if we cannot put the child as child-centred. Let's say child and then the               |
| 820 |     | content that you are going to choose will come from the needs of the child nè?                    |
| 831 | P11 | He will determine the content.  |
| 822 | I   | Let's say that. The child is going to determine the content which you are going to                |
| 823 |     | [unclear]. Will content has an influence on feelings? Or will the feelings that the               |
| 824 |     | child bring have an impact on the content?  |
| 825 | P11 | I think that the feelings that the child will bring because you are child-centred.                |
| 826 |     | So, everything will be with your child.   |
| 827 | I   | [laughter] You know what, you have changed my whole formalized thing.                             |
| 828 | P11 | Sorry, I didn't mean to [laughter]. You see, my child is in the middle.[draw a                    |
| 829 |     | child in a circle] That little boy, that little girl. He is going to determine what my            |
| 830 |     | content is.   |
| 831 | I   | Mind-mapping?   |
| 832 | P11 | Yes, we are doing a mind-map. That content, is going to come with a certain                       |
| 833 |     | amount of feelings from the teacher. How the child, how the teacher actually                      |
| 834 |     | presents that content, is going to be determined by the teacher's feelings.                       |
| 836 | I   | Thank you Participant, for the sharing of your knowledge, insight and feelings regarding Grade R. |

## APPENDIX Q

|  |
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| <b>TRANSCRIPT OF PILOT SEMI-STRUCTURED INDIVIDUAL INTERVIEW</b><br><b>PARTICIPANT 14</b> |
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I – Interviewer; P14 - Participant 14

| Line | I/P | Transcription   |
|------|-----|---|
| 1    | I   | P, thank you for having me in your class today for video-taping and |
| 2    |     | thank you for this interview. May I ask if I may make a tape-       |
| 3    |     | recording, a video-recording, a sound recording of what we are      |
| 4    |     | going to discuss?   |
| 5    | P14 | Okay.   |
| 6    | I   | Is that fine with you? Okay, just give me some background. How      |
| 7    |     | long have you been a Grade R teacher?                               |
| 8    | P14 | It's now, six years.  |
| 9    | I   | It's been six years at this school?                                 |
| 10   | P14 | At this school, I've got four years.                                |
| 11   | I   | Previously, you were at your home?                                  |
| 12   | P14 | No, previously, I was working at Little ...Pre-school.              |
| 13   | I   | Okay, Little..., also here in town?                                 |
| 14   | P14 | Mmm. Here in the township and then I was attached, in 2004, in      |
| 15   |     | D.  |
| 16   | I   | You were attached to this .. school. The Grade R class. So, you     |
| 17   |     | are also getting a Grant-in-Aid, a subsidy from the government?     |
| 18   | P14 | I do, I get a subsidy from the Department of Education.             |

|    |     |   |
|----|-----|---|
| 19 | I   | And before you started at Little ..., what did you do before that?  |
| 20 |     | No, I was a voluntarily teacher. And then I came here to            |
| 21 |     | [name of the town] and I started here at [name of town] my          |
| 22 |     | own pre-school.   |
| 23 | I   | Okay, so you've never been formally trained as a primary school     |
| 24 |     | teacher or whatever?  |
| 25 | P14 | No.   |
| 26 | I   | With this Grant-in-Aid, did you receive any training from the       |
| 27 |     | Department of Education?  |
| 28 | P14 | I did receive training from the Department of Education, the        |
| 29 |     | SANTS, Siseko Moteko.   |
| 30 | I   | Siseko Moteko, where you obtained your Level 4?                     |
| 31 | P14 | Yes. I obtained my Level 4. And I also attended workshops           |
| 32 |     | which were run by the Department of Education. But now,             |
| 33 |     | previously, I was doing pre-school training with CSD, Centre for    |
| 34 |     | Social Development in Grahamstown, at Rhodes.                       |
| 35 |     | Okay, goed. What we did, just to give you a background. What        |
| 36 |     | we did at the group, I gave three statements and it was about: Tell |
| 37 |     | me what you think or call to mind when I use the term Numeracy.     |
| 38 |     | And tell me about your experiences in implementing numeracy         |
| 39 |     | in your classroom. And tell me about your experiences of            |
| 40 |     | attending numeracy in-service training sessions by the District     |
| 41 |     | Office. When I put these research statements to you, I asked you    |
| 42 |     | to write, whatever comes in mind, on little blue cards. And once    |

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| 43 |     | we have done that, we put it up on the wall and the we grouped                 |
| 44 | I   | it into groupings and we named those groupings. We got 5                       |
| 45 |     | groupings. The one was <i>Daily Programme</i> . The other one was              |
| 46 |     | <i>Learner's Involvement</i> . The other one was <i>Resources</i> . The fourth |
| 47 |     | one was <i>Learning Outcomes</i> and the fifth one was about                   |
| 48 |     | <i>Teacher's experiences</i> . Once we have done that, we wrote a              |
| 49 |     | descriptive paragraph. But this was the group effort. Now, I want              |
| 50 |     | to know, what are your personal experiences and feelings or                    |
| 51 |     | beliefs or knowledge about the <i>Daily Programme</i> . Just tell me           |
| 52 |     | about your daily programme, that you implemented today?                        |
| 53 | P14 | My daily programme today nè? My focus was in numeracy, and                     |
| 54 |     | Then it was about counting, about shapes, sequence the shapes and              |
| 55 |     | then it was also about measurement. So my [unclear] was there.                 |
| 56 |     | A Grade R learner, bona, they learn through playing, that's why I              |
| 57 |     | Was using the water, because my topic was water for the week. So               |
| 58 |     | we were measuring the water with different cups with different sizes           |
| 59 |     | So my feeling is that, sometimes, the learner is unaware that he               |
| 60 |     | or she is learning because now, they were counting by pouring                  |
| 61 |     | the water. So I thought mathematics, numeracy start from Grade R.              |
| 62 |     | But now I was not aware of that and at homes, it is also numeracy.             |
| 63 |     | When they are eating, I can ask, how many spoons do you eat with?              |
| 64 |     | So the focus was on count. Because we count everyday. Everyday                 |
| 65 |     | objects, we are counting. Then even measurement, the importance                |
| 66 |     | of measurement today, we were doing water, so that they know you               |

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| 67 |     | must not waste water. You must use just the amount for that thing.    |
| 68 |     | So today I was using different type of sizes. If you need smaller     |
| 69 |     | water, you are going to use the smaller one. If you need more         |
| 70 |     | water, it's going to be the bigger one nè? And the shapes, it's       |
| 71 |     | shapes and colours. The child must be aware of the shapes, be         |
| 72 |     | Aware of the colour, because colours and shapes are just like         |
| 73 |     | counting. It's everyday objects. If the child is watching tv, he can  |
| 74 |     | see, oh, this is the shape of something. Or maybe he is at the        |
| 75 |     | location, then there passes a red car. It is then still the-shape and |
| 76 |     | colour. So I will, that's why I was teaching them shapes and          |
| 77 |     | colours. They must grow up with shapes and colours. Identify the      |
| 78 |     | cars. And even to do the patterns. Like to today, we do the patterns  |
| 79 |     | With shapes and colours, sequencing the shapes. So from Grade R.      |
| 80 |     | The child goes up and he has learnt to recognize patterns             |
| 81 |     | [something in isiXhosa – unclear], and the child can see that I don't |
| 82 |     | do the other one, I'm unique, he can see the pattern for himself,     |
| 83 |     | maybe in the mirror. And that's what numeracy is all about.           |
| 84 | I   | Are you having everyday numeracy?                                     |
| 85 | P14 | Everyday I am doing numeracy because I, in the morning ring,          |
| 86 |     | they are counting, they are doing the weather, they are doing the     |
| 87 |     | days of the week, they are doing the months of the year. So           |
| 88 |     | counting, they are counting there. Then if you do creatives, then     |
| 89 |     | numeracy is there.  |
| 90 |     | So is they paint, what colour is this, is this the blue paint or can, |

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| 91  |     | sometimes they mix for themselves. So numeracy is always there.      |
| 92  | I   | Okay. And you also said you integrated a lot of your topic?          |
| 93  | P14 | Ja.  |
| 94  | I   | And in this case, because I've noted as you said, with your first    |
| 95  |     | ring you had water over here and in your creative activity you       |
| 96  |     | had on this worksheet how full the glass was as well as cutting out  |
| 97  |     | and pasting fishes and your outside movement game, where they        |
| 98  |     | had to run and pour water. So you integrated a lot.                  |
| 99  | P14 | Mmm.   |
| 100 | I   | I just want to come back to what we've just said now about           |
| 101 |     | worksheets. You said to me you are doing this week the topic, how    |
| 102 |     | long is your topic now?  |
| 103 | P14 | My topic is for two weeks.   |
| 104 | I   | Your topic is for two weeks.   |
| 105 | P14 | This is the last week for this topic. I am doing this water.         |
| 106 | I   | So next week you will start another topic?                           |
| 107 | P14 | Yes. Plants.   |
| 108 | I   | Plants next week? And also your creative activities that you did     |
| 109 |     | today were, they had to colour in which was full and which was       |
| 110 |     | empty.   |
| 111 | P14 | The measurement  |
| 112 | I   | Ja, the measurement over here. And at that table they had to count   |
| 113 |     | the bottle tops on the number line, as well as identifying on the    |
| 114 |     | worksheets the three objects and as we said, they had to cut out the |

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| 115 |     | fishes and colour it in and paste it onto the water background, and at  |
| 116 |     | the other table they had to do patterns. Are they doing these           |
| 117 |     | activities for today, will it also carry for two weeks?                 |
| 118 | P14 | Yes, they carry for two weeks. What I am doing, [something              |
| 119 |     | in isiXhosa – unclear] is, today is Wednesday, so I know that           |
| 120 |     | Group A was doing [unclear] and counting, so tomorrow they              |
| 121 |     | are maybe going to do the fish and the water, so that they are          |
| 122 |     | rotating for the whole week. So now, every other week, every child      |
| 123 |     | has work at 4 tables.   |
| 124 | I   | So you, every week you work out for this week new activities. So        |
| 125 |     | it's not the same activities for two weeks?                             |
| 126 | P14 | Mmm.  |
| 127 | I   | Okay, just tell me, if I look at your classroom, it is very well        |
| 128 |     | resourced. You've got a fantasy corner, you've got a lovely             |
| 129 |     | book corner. You've got block play over there and you've got a          |
| 130 |     | theme table, nicely displayed. And you've got very much                 |
| 131 |     | pictures on the walls as well. In your, let me ask you like this.       |
| 132 |     | Do you feel you've got, you will be able to cover all the numeracy      |
| 133 |     | assessment standards, the mathematics assessment standards for          |
| 134 |     | the year? Remember, you get your assessment standards from the          |
| 135 |     | learning outcomes.  |
| 136 | I   | Okay P14, we've just had a problem with our video-tape.                 |
| 137 |     | In our first presentation, let us just recap for the video tape's sake, |
| 138 |     | is that you agreed to have this video interview with me. And you        |

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| 139 |      | also said to me, that you've been the past 6 years a Grade R            |
| 140 |      | teacher, especially the past 4 years at the school. And that you've     |
| 141 |      | had your training at Siseko Moteo, where you had got your Level 4       |
| 142 |      | certificate and that you have, as well, attended training at the Centre |
| 143 |      | for Social Development. You also said to me that you've got             |
| 144 |      | about 26 children in your class. Normally 30?                           |
| 145 | P14  | Yes.  |
| 146 | I    | But today, there are only 26. And the main language of teaching is      |
| 147 |      | isiXhosa?   |
| 148 | Yes. | Yes.  |
| 149 | I    | And we started discussing the first one of the daily programme, and     |
| 150 |      | you told me that you focused on your theme or topic of water that       |
| 151 |      | Runs for two weeks. And that you focused today on numeracy              |
| 152 |      | activities in your morning ring. You focused on measurement             |
| 153 |      | whereby the learners had to throw water in containers, and say          |
| 154 |      | how many containers will fill, how many cups will fill that             |
| 155 |      | container. So that was measurement.                                     |
| 156 | P14  | Yes.  |
| 157 | I    | And you also did patterns with shapes, where they had to pack           |
| 158 |      | out a pattern. As well as, you did a lot of counting and you            |
| 159 |      | also did the weather, as well as the months and the days of the week    |
| 160 |      | with the learners.  |
| 161 | P14  | Yes.  |
| 162 | I    | Okay, from there you went over to creative activities where             |

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| 163 |     | four worksheets were put on the tables for your four groups to        |
| 164 |     | participate. They did colour in for measurement worksheet, saying     |
| 165 |     | whether it was empty or half full. And at the other table they had to |
| 166 |     | complete a pattern, and at the other table they had to count bottle   |
| 167 |     | tops on the number line and then complete the worksheet by            |
| 168 |     | Indicating which 3 objects. And then on the fourth table they cut     |
| 169 |     | out and colour in and paste the fish on the back ground of water.     |
| 170 |     | Afterwards we went outside, and there you did movement with           |
| 171 |     | them, where they had a water game; they had to run and fill up the    |
| 172 |     | container and throw it out in the other buckets. As well as, with     |
| 173 |     | the literacy activities, where you read them three story books, and   |
| 174 |     | the learners themselves discussed a storybook with you.               |
| 175 | P18 | Mmm.  |
| 176 | I   | And then the learners chose to tell stories of their own. You         |
| 177 |     | very much integrated the numeracy assessment standards and you        |
| 178 |     | told me, you do experience some problems with some of the             |
| 179 |     | numeracy assessment standards, where you need more hands-on           |
| 180 |     | examples and training, especially with data handling. And with        |
| 181 |     | breaking up, and you've said to me, sometimes, learners also          |
| 182 |     | battle to count backwards and you need more activities to explain     |
| 183 |     | to you, 2-D shapes and 3-D objects to the learners. Okay, you also    |
| 184 |     | told me you did problem-solving questions with the learners, with     |
| 185 |     | the theme. Can you just recap for me what you said there?             |
| 186 | P14 | Problem-solving, 'cause I was thinking this is where you, I was       |

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| 187 |     | teaching about water, the importance of water, now the              |
| 188 |     | problem-solving is that, how can we solve the problem when the      |
| 189 |     | tap, when you've got a leaking tap? And then they said you have     |
| 190 |     | to close the tap's [unclear], or the others said, you can take a    |
| 191 |     | bucket and put it under the tap so the water can, you pour the      |
| 192 |     | water into the bucket. So that is how we solved a problem today     |
| 193 |     | about a leaking tap.  |
| 194 | I   | Okay, and then we discussed learners', the things that the group    |
| 195 |     | said and the descriptive paragraph. And we came to the teacher      |
| 196 |     | and learner-directed activities, where you told me, the learners    |
| 197 |     | directed activities are when they had to come and work on their own |
| 198 |     | And you also said to me, you give them the exposure to choose       |
| 199 |     | by which colours they are going to use, and what kind of pattern    |
| 200 |     | they are going to make.   |
| 201 | P14 | Yes.  |
| 202 | I   | Okay, I think you also mentioned that you've got a problem with     |
| 203 |     | the outdoor play,   |
| 204 | P14 | Yes.  |
| 205 | I   | that your school does not have a specific area, and you have not    |
| 206 |     | got the swings and the jungle gym and that your learners might      |
| 207 |     | experience large motor, no, not experience but they are not exposed |
| 208 |     | to enough large motor experiences. Because you only do              |
| 209 |     | running, and skipping and playing with the ball at this stage.      |
| 210 | P14 | Mmm.  |

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| 211 | I   | Okay, we have covered all of that one?                              |
| 212 | P14   | Yes.  |
| 213 | I   | Okay, let's go on to the next one. The next one is about            |
| 214 |   | learner's involvement. Just tell me, what is your feeling about     |
| 215 |   | learner's involvement.  |
| 216 | P14   | Learners' involvement, my feeling is, that when you involve         |
| 217 |   | them, they become, they're not afraid of the teacher, because they  |
| 218 |   | Are used to be free. So you give them an opportunity to, maybe      |
| 219 |   | in the morning they, sometimes on Mondays, they tell stories        |
| 220 |   | about the weekend, so there is it where they become                 |
| 221 |   | involved. And sometimes, you can also tell maybe this child has     |
| 222 |   | got some problem. He was absent and then she came back and then     |
| 223 |   | she was going to report, Teacher I was having flu, and I was        |
| 224 |   | going to the clinic and so now, even if we are doing activities,    |
| 225 |   | we involve them in the activities. "Cause now, what I do to         |
| 226 |   | involve them, I even teach them how to clean their own              |
| 227 |   | classroom, because this classroom, it is the learners who clean it. |
| 228 |   | Because after school, they take the brooms and they sweep           |
| 229 |   | everything, they can even sweep the floors. I involve them in each  |
| 230 |   | and every activity. Even to set the theme table, I'm using them, so |
| 231 |   | I am going to tell them, okay we are going to learn about           |
| 232 |   | something like water. So, every morning when they came in, I        |
| 233 |   | fetch water, they put water on the table. After I tell them to pour |
| 234 | water in the buckets, they become involved. |   |

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| 235 | I   | So you feel involvement is very important?                                    |
| 236 | P14 | It is very important.   |
| 237 | I   | Okay, what do you do with a learner that is not involved?                     |
| 238 | P14 | The learner who is not involved, I give him a task to do.                     |
| 239 |     | Sometimes I am going to ask her to bring the bags of the                      |
| 240 |     | learners to the learners, when it is snack time. So I involve them,           |
| 241 |     | even the one who is shy to talk. So I can say to her, you've got              |
| 242 |     | nice thing on, can you tell us about this nice thing. Or maybe,               |
| 243 |     | Wena, do you ever go to town and then she is going to respond,                |
| 244 |     | "Yes with my mother". So I always give them some things to                    |
| 245 |     | talk so that they can talk and do. So that at the end of the day, she         |
| 246 |     | is involved with the activities.  |
| 247 | I   | Okay, I must say, I have noticed today, that you've got a very                |
| 248 |     | relaxed and warm atmosphere with your learners. You laughed a                 |
| 249 |     | lot, you've played with them, with the ball and they aren't                   |
| 250 |     | afraid of you. Definitely not. And I have seen you have                       |
| 251 |     | asked specific learners some questions as well. Okay, shall we                |
| 252 |     | look at what the group said here? <i>Working as a team or group,</i>          |
| 253 |     | that your learners must sometimes work in a team or a group,                  |
| 254 |     | especially in your movement activities, they participated as a group          |
| 255 |     | nè?   |
| 256 | P14 | Yes.  |
| 257 | I   | Okay, <i>difficult backwards</i> , we have spoken about it, <i>think that</i> |
| 258 |     | <i>learner involvement is good</i> , which you also agreed to. <i>Some</i>    |

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| 259 |     | <i>learners are not confident and needs help and support and others</i>    |
| 260 |     | <i>are that is what you just told me, how you encourage</i>                |
| 261 |     | <i>them. Active involvement, communication, you asked them to</i>          |
| 262 |     | <i>share their news, they must take turns, enjoyment, that I have</i>      |
| 263 |     | <i>seen, I have taken quite a thrill hearing learners laughing</i>         |
| 264 |     | <i>spontaneously, if a child is laughing, then I know, this is a</i>       |
| 265 |     | <i>happy child. Sharing again, Learners are helping each other</i>         |
| 266 |     | <i>in terms of counting, and drawing the numbers of objects</i>            |
| 267 |     | <i>needed, so peer teaching comes in a lot.</i>                            |
| 268 | P14 | Ja.  |
| 269 | I   | Okay, I've seen it at that table over there, with the patterns,            |
| 270 |     | that they start helping one another nè?                                    |
| 271 | P14 | Yes.   |
| 272 | I   | Okay, <i>and they must share ideas, and collection, you ask them</i>       |
| 273 |     | <i>to bring stuff as you've said for the theme table as well. Okay the</i> |
| 274 |     | <i>descriptive paragraph, Learner involvement means that learners</i>      |
| 275 |     | <i>are actively involved and communicating ideas, feelings and</i>         |
| 276 |     | <i>experiences. Learner involvement can show you learners with</i>         |
| 277 |     | <i>barriers. For example, numeracy, they use resources but they</i>        |
| 278 |     | <i>can count orally but they cannot demonstrate counting one to one</i>    |
| 279 |     | <i>or with the apparatus. Learner involvement is also about sharing</i>    |
| 280 |     | <i>resources and ideas in a group situation, as well as peer learning</i>  |
| 281 |     | <i>where a learner can assist another learner with grasping a</i>          |
| 282 |     | <i>numeracy concept such as counting backwards. Thus learner</i>           |

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| 283 |     | <i>involvement entails that a learner is able to work in a group but</i>   |
| 284 |     | <i>also to work sometimes individually, as an individual. When</i>         |
| 285 |     | <i>learners are working in a group the teacher is able to identify</i>     |
| 286 |     | <i>whether the learner is confident, or if he is experiencing learning</i> |
| 287 |     | <i>barriers in a group but also when he or she is working alone. The</i>   |
| 288 |     | <i>crux of learner involvement means that all learning activities</i>      |
| 289 |     | <i>need to be learner-centred, learner-based and learner-paced. Just</i>   |
| 290 |     | tell me, learner-centred, what do you understand, what is your             |
| 291 |     | feeling about it?  |
| 292 | P14 | Learner-centredness, is like the activities, you must have various         |
| 293 |     | activities, so even this one, must not be embarrass, I can't do this.      |
| 294 |     | If you've got various activities, the child can see, oh, I am able to      |
| 295 |     | do that, so I can do that, that is learner-centred. You don't              |
| 296 |     | always give him instructions, you must do this and this and this.          |
| 297 |     | Because what I've learnt, I introduce the tables, at this table they are   |
| 298 |     | going to do this and this. So, today, this one is going to that table,     |
| 299 |     | because it is going to be easy for me, so they choose the tables.          |
| 300 |     | They don't always go in their groups.                                      |
| 301 | I   | Okay, so they chose this morning where they want to go?                    |
| 302 | P14 | Yes, because I explained that, at the tables I've got this and this and    |
| 303 |     | this. So when they choose a table, you know they are going to be           |
| 304 |     | able to cope with it. So now today, they choose their table. So            |
| 305 |     | now, Mam I want the water and the fish, so they must go there.             |
| 306 | I   | Okay. Tell me, do you have got learners with barriers in your class?       |

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| 307 | P14 | I do have learners with barriers in my class.                        |
| 308 | I   | How many, about?   |
| 309 | P14 | I am sure they are about 4.  |
| 310 | I   | About four. What kind of barriers?                                   |
| 311 | P14 | The problem is, even these four children, who are always, they       |
| 312 |     | don't come regularly to school.                                      |
| 313 | I   | So they are very, they are often absent?                             |
| 314 | P14 | Often absent. And then when we are doing a theme, it seems as if it  |
| 315 |     | is new to them. They were not there, yabo?                           |
| 316 | I   | Okay, okay.  |
| 317 | P14 | Then the other thing, it is age.                                     |
| 318 | I   | It is age?   |
| 319 | P14 | You can see I've got four [unclear] ones. Because I can              |
| 320 |     | sometimes see, that because of the age.                              |
| 321 | I   | What is your youngest child?   |
| 322 | P14 | My youngest is four years.   |
| 323 | I   | Four years and your eldest?  |
| 324 | P14 | Five.  |
| 325 | I   | So you've got four and five turning six?                             |
| 326 | P14 | Ja, four and five turning six. And the other thing is, the barriers, |
| 327 |     | I always notice nè? Sometimes this child is a background.            |
| 328 |     | Because of the background of the house, it affects when you are      |
| 329 |     | doing, when you say go and do the activities. Because I've got one   |
| 330 |     | child, I won't say to his parents that he's got the gaps nè, but     |

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| 331 |     | because, of not coming to school each and every day, the                 |
| 332 |     | background, so they are now in the class, I must struggle. Even          |
| 333 |     | now, because he does not use this, he is using that. He is always in     |
| 334 |     | The location, so this child is struggling. I don't think it is a barrier |
| 335 |     | because it is sometimes the background-                                  |
| 336 | I   | The background. Just tell me, if you say the background, is it that it   |
| 337 |     | is a lot of poverty?   |
| 338 | P14 | It is not so much poverty because, here at school, we've got             |
| 339 |     | nutrition.   |
| 340 | I   | So they eat regularly?   |
| 341 | P14 | They eat regularly. The problem is that, when I do home visits, I        |
| 342 |     | Find that the mummies are drinking a lot. So if the mother get a         |
| 343 |     | chance, they drink.  |
| 344 | I   | Okay, okay, it can be alcohol, playing a role.                           |
| 345 | P14 | Ja.  |
| 346 | I   | And HIV/AIDS? Do they play a big role?                                   |
| 347 | P14 | Cause I've got two in my class who are HIV/AIDS positive and             |
| 348 |     | even their mothers died.   |
| 349 | I   | It's so sad, hey?  |
| 350 | P14 | Mmm.   |
| 351 | I   | Okay, goed, anything else you want to say about learner                  |
| 352 |     | involvement, ag barriers? Are these the only barriers they've got?       |
| 353 |     | Do you find that learners, when they make a number 3, they               |
| 354 |     | do it upside down?   |

|     |     |   |
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| 355 | P14 | They do it upside down. And sometimes it is a m or a w, you see,    |
| 356 |     | they've got that problem in numbers. But they can recognize it.     |
| 357 |     | But it is difficult to write it.                                    |
| 358 | I   | Okay, do you feel that you've got enough experiences and            |
| 359 |     | knowledge to handle this situation, to remedy it? To correct the    |
| 360 |     | problem with the child or do you need more training on it?          |
| 361 | P14 | The thing is, now what I was having in mind nè? Because             |
| 362 |     | sometimes, you know, at the training, you are told at the training. |
| 363 |     | But when it comes to the assessment standards, 'cause now the       |
| 364 |     | idea was, now a Grade R child does not write, just prepare him to   |
| 365 |     | write and then he is going to write when he is at Grade 1.          |
| 366 |     | But now the assessment standards they bound us to that, they have   |
| 367 |     | to write. "Cause the assessment standard has got that writing       |
| 368 |     | nè? It's drawing, everything. It is now that the problem I          |
| 369 |     | recognized is that they must start writing also. Because of the     |
| 370 |     | assessment standards.   |
| 371 | I   | Because of the assessment standards.                                |
| 372 |     | And do you've got   |
| 373 |     | enough training to know how to handle, to learn children to write?  |
| 374 | P14 | No, we don't have. It's only when we go to the workshops.           |
| 375 | I   | Okay, so you feel that you also need more hands-on experiences      |
| 376 |     | how to deal with it?  |
| 377 | P14 | Mmm. And then, like a Grade R teacher, where do I start,            |
| 378 |     | so that he can write?   |

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| 379 | I   | You see, you are asking me now that, so I am going to answer           |
| 380 |     | you quickly, although it is not part of the video. The assessment      |
| 381 |     | standards are actually not saying that he must write. I agree with     |
| 382 |     | you, it's the preparation for writing. But some learners               |
| 383 |     | will start spontaneously writing. But what they do say there, is       |
| 384 |     | they must trace and copy.  |
| 385 | P14 | Ja.  |
| 386 | I   | That's why it is very important, I saw your one worksheet, the         |
| 387 |     | 3, they had, that they can trace. But before they go to that           |
| 388 |     | tracing, they should have had a lot of exercises drawing on the        |
| 389 |     | board, drawing on the sand, the floor, and then again, that's why I    |
| 390 |     | am asking you, why it is so important, to mould with the dough, and    |
| 391 |     | also with the shapes, they feel and touch it, before they eventually   |
| 392 |     | start to trace it and to copy it. And then spontaneously they will     |
| 393 |     | start doing some of it. Okay, but you said you need more               |
| 394 |     | training? It is a whole lot of series of steps that one's got to go    |
| 395 |     | through and it is very practical and it needs to be continuously.      |
| 396 |     | Okay? But would you like to have a workshop on that?                   |
| 397 | P14 | Because the thing is, they are copying and trace nè? Like when         |
| 398 |     | I draw there on the board, I say the pattern, I can see some of them   |
| 399 |     | They draw and copy the name, yabona? So that they copy                 |
| 400 | I   | And those that are copying, if they do it wrongly, let's say you write |
| 401 |     | 'tap' and they write 'par', you just show them again what you've       |
| 402 |     | written by not saying they did it incorrectly, but this is what        |

|      |     |   |
|------|-----|---|
| 403  |     | you've written, 't- a-p', you spell it out with them, so that           |
| 404  |     | they can understand, whilst they have written 'p-a-t', that kind of     |
| 405  |     | thing, but there's a whole process. It is actually very sad, I am also  |
| 406  |     | from the old school that formal writing does not belong in the          |
| 407  |     | Grade R class. I feel very strongly about that, because, as you've      |
| 408  |     | said, some learners are four years and they are still not ready for it. |
| 409  |     | Goed, let's go on to the next one, and it's about resources. I've       |
| 410  |     | seen your class is very well resourced.                                 |
| 411  | I   | Goed, let's go on to the next one, and it is about Learning             |
| 412  |     | Outcomes. Tell me, your experiences, your feelings, your beliefs        |
| 4113 |     | about it, Learning Outcomes.  |
| 414  | P14 | Learning Outcomes, I've experienced, they help you when you plan.       |
| 415  |     | Because you can plan your theme, then after two weeks, I can see,       |
| 416  |     | okay, I've achieved this.   |
| 417  | I   | The assessment standards?   |
| 418  | P14 | Ja, the assessment standards. For I have to do it, I am not going       |
| 419  |     | to leave it and go to another theme. I am going there. Sometimes,       |
| 420  |     | I can do it in two weeks. Okay, I did not achieve the assessment        |
| 421  |     | standards, this is what I presented but the learners didn't understand, |
| 422  |     | I go back again, yabona?  |
| 423  | I   | So, you say that the learning outcomes are important for you?           |
| 424  | P14 | Mmmm.   |
| 425  | I   | To see, to check whether you have achieved the assessment               |
| 426  |     | standard?   |

|     |     |  |
|-----|-----|--|
| 427 | P14 | Mmm.   |
| 428 | I   | Where do you get these learning outcomes and assessment            |
| 429 |     | standards?   |
| 430 | P14 | Where do I get it?   |
| 431 | I   | Ja. From the planning?   |
| 432 | P14 | Yes, when I plan, because I plan according to the assessment       |
| 433 |     | standards.   |
| 434 | I   | And these come from the policy documents?                          |
| 435 | P14 | Yes. From the policy documents.                                    |
| 436 | I   | Okay, do you feel that you've got enough assistance with           |
| 437 |     | planning, with, from your training and teacher guides? Do you've   |
| 438 |     | got teacher guides that also help you? Not really?                 |
| 439 | P14 | They are helping me, because, now I am doing according             |
| 440 |     | to the teacher's guide, 'cause in the first place wena, we're      |
| 441 |     | first grade R teachers. We are just planning, we did not have any  |
| 442 |     | resources or what. But now we are having this teacher's guide,     |
| 443 |     | so I know, okay, this is the topics, they are integrating. Because |
| 444 |     | now I do water, from water it's plants, yabona?                    |
| 445 | I   | Mmm.   |
| 446 | P14 | So we all use the water for the plants,                            |
| 447 | I   | So you build a step on?  |
| 448 | P14 | Ja.  |
| 449 | I   | So it is not loose standing.                                       |
| 450 | P14 | It is not loose standing. So with the teacher's guide, it is       |

|     |     |   |
|-----|-----|---|
| 451 |     | guiding us, how to plan, even [unclear] maybe it was water,               |
| 452 |     | okay, you say mos, what do you use water for? They will say for           |
| 453 |     | drinking, now we are going to the plants. Again we are going              |
| 454 |     | to use that water for the plants. For the teacher it is very good.        |
| 455 | I   | Okay, goed. Let's look what the group said and then we can                |
| 456 |     | add here. <i>Learning Outcomes, learners can count 1 to 10 orally, do</i> |
| 457 |     | you focus a lot on counting? If you say, is that the assessment           |
| 458 |     | Standard that you focus the most on? Counting on? Or                      |
| 459 |     | Measurement or Shapes?  |
| 460 | P14 | No, I am not relying on counting. I do all of them.                       |
| 461 | I   | You do all of them? You integrate them?                                   |
| 462 | P14 | Ja, they must integrate. The child counts, he must know how               |
| 463 |     | to measure, that's also counting, or sequencing. So we use all            |
| 464 |     | of them but when they do all of them, they do counting always.            |
| 465 | I   | I'm just now thinking of water, have you told the learners                |
| 466 |     | things like, floating?  |
| 467 | P14 | Yes, last week.   |
| 468 | I   | You did that with them as well? Okay.                                     |
| 469 | P14 | We did sinking, floating last week, and the bubbles in the water, all     |
| 470 |     | those things.   |
| 471 | I   | Okay, and even your science you bring in? That water can melt,            |
| 472 |     | you can freeze it and then it becomes a solid and it can melt and         |
| 473 |     | then it becomes water again.  |
| 474 | P14 | Last week, we were experimenting with that, the paper. We put             |

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| 475 |     | the paper on the water, the paper does not sink, because it is not          |
| 476 |     | wet. Then we leave it there in the sun and we came back to the              |
| 477 |     | classroom. After group work we go out, and see, oh, it's wet and            |
| 478 |     | has sunk.   |
| 479 | I   | Okay, goed, that's good. Because it got wet, it's heavier. So               |
| 480 |     | there, you addressed your weight, <i>days of the month, measurement,</i>    |
| 481 |     | because most of the time it is counting, you also counted <i>volume –</i>   |
| 482 |     | <i>days of the week, counting is good, colours, .</i> Let's look at the     |
| 483 |     | descriptive paragraph. <i>Learning outcomes indicate what</i>               |
| 484 |     | <i>learners must achieve by demonstrating their understanding and</i>       |
| 485 |     | <i>skills based on the topic as well as the assessment standards the</i>    |
| 486 |     | <i>learners will be assessed on.</i> Okay. <i>The learning outcomes are</i> |
| 487 |     | <i>developing the learners numeratically in order for them to be able</i>   |
| 488 |     | <i>to count or to draw up [unclear]. The learning outcomes and</i>          |
| 489 |     | <i>assessment standards guide the teacher what learners must be able</i>    |
| 490 |     | <i>to achieve and therefore, guiding teacher's planning for such</i>        |
| 491 |     | <i>learning activities.</i> When you plan, do you feel positive about       |
| 492 |     | planning? Does it take a lot of time? What do you feel about                |
| 493 |     | planning?   |
| 494 | P14 | Oeee. Planning is a lot of paper work, and it takes time. And               |
| 495 |     | what we are doing now, we plan in a group. And even there, it is            |
| 496 |     | difficult to plan with a group. Because sometimes, you state a date         |
| 497 |     | on such and such time you are going to meet, maybe there will               |
| 498 |     | only be two of you, how can you plan if you are only two of us              |

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| 499 |     | So, it is also up and down. But the planning itself, it is                 |
| 500 |     | paperwork. Because you do the work schedule, you do                        |
| 501 |     | the lesson plan, you do the weekly plans, you must do                      |
| 502 |     | assessment, the theme, everything you plan to be prepared. So you          |
| 503 |     | must take time to plan. Even if it is two weeks, you must know,            |
| 504 |     | okay, you prepare a lot for two weeks. And it is collecting and            |
| 505 |     | collecting.  |
| 506 | I   | So you would rather, if you were the Minister of Education, you            |
| 507 |     | would have made it simpler?  |
| 508 | P14 | Ewe, the thing is, maybe I would have done that, and then just             |
| 509 |     | do the whole year planning to give to the teachers. Then                   |
| 510 |     | the teacher, okay, she can add to the activities, jabona?                  |
| 511 | I   | Ja, or change the activities.  |
| 512 | P14 | Change the activities to suit the learners, but now, we have to            |
| 513 |     | plan the whole year, the lesson plans, the whole year's work               |
| 514 |     | Schedules.   |
| 515 | I   | And the planning is for numeracy?  |
| 516 | P14 | It's for numeracy, three learning ...                                      |
| 517 | I   | So life skills, literacy, your stories?                                    |
| 518 | P14 | Outdoor, everything must be there.   |
| 519 | I   | Okay, so you also feel it is a bit too much. You want it simpler           |
| 520 |     | and that they should have done it.   |
| 521 | P14 | Mmmm.  |
| 522 | I   | Okay, goed. Our next one is, about <i>Teachers' experiences of inset</i> . |

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| 523 |     | Now, we have already spoken about teachers' experiences but it       |
| 524 |     | was more teachers' experiences of training received. How did         |
| 525 |     | you feel about the training you received?                            |
| 526 | P14 | The training I have received, it helps me a lot. The other thing     |
| 527 |     | is I, now, when I go to training, sometimes, I don't come and        |
| 528 |     | implement you know. Now, when I discover a problem, man, it          |
| 529 |     | was on the training. There was this problem, so, the training is     |
| 530 |     | helping. And then, it is only when you go back or ask a              |
| 531 |     | colleague: do you remember at the training, there was this           |
| 532 |     | problem and now, I am having this problem, I mean that, the          |
| 533 |     | training helps you. And at this stage, being a Grade R teacher,      |
| 534 |     | you can't teach, if you are not trained. You need the training.      |
| 535 | I   | So you still feel you need more training?                            |
| 536 | P14 | More training. I need more training.                                 |
| 537 | I   | You want to grow?  |
| 538 | P14 | I want to grow. Because every day, you meet challenges yabo? So      |
| 539 |     | if you are trained, then you meet the challenges and then oh, I know |
| 540 |     | how to solve this. So the training is very good for me.              |
| 541 | I   | Just something else, do you enjoy being a teacher?                   |
| 542 | P14 | I enjoy it very much being a teacher. Because why, I am              |
| 543 |     | dealing with the small ones. You know, sometimes I can come to       |
| 544 |     | school and I am down. But meeting with Grade R group, I can          |
| 545 |     | talk anything and then out of the blue, I laugh. And then I thought  |
| 546 |     | Gee, I was so down but now because of these learners, I even         |

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| 547 |     | forget what happened last night or this morning. Because when          |
| 548 |     | I am with them, I became so like them, and then I can even             |
| 549 |     | identify them, okay, that child, she is not fresh today, she is down   |
| 550 |     | And then what I am going to do, when I go outdoor, I                   |
| 551 |     | am going to do a game, just to chase them. I want this child to        |
| 552 |     | be happy too, and forget whatever and then they are laughing at        |
| 553 |     | me, when we came back. Joee, teacher can't catch me and now I          |
| 554 |     | can run, the teacher cannot run. That's very enjoyable.                |
| 555 |     | [laughter]. I enjoy it.  |
| 556 | I   | You enjoy it?  |
| 557 | P14 | I enjoy it. I see that this is my place. If I have to teach Grade 7 or |
| 558 |     | 8, no, I'll be frustrated. I enjoy with this Because why, they are     |
| 559 |     | Very easy. Even if I, sometimes they can make you cross, they can      |
| 560 |     | See I am cross but I am not going to stay cross the whole day. And     |
| 561 |     | Then again, I go to their level.                                       |
| 562 | I   | I noticed that, we were speaking about you get sometimes cross.        |
| 563 |     | Because one also gets tired nè? It is very active, but what did I want |
| 564 |     | to say now? Oh, I wanted to say I notice in your class, you            |
| 565 |     | haven't got discipline problems? They listen to you but they are not   |
| 566 |     | scared of you. I feel that it has come back to the fact that you have  |
| 567 |     | created a warm and, they feel secure environment. It comes back        |
| 568 |     | to the daily programme, they know what to expect and what is           |
| 569 |     | going to happen.   |
| 570 | P14 | Yes. And also I built with the parent that trust, because the          |

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| 571 |     | other can go home, and when I see them I give them a message        |
| 572 |     | nè, like because this is a letter and I always explain to them the  |
| 573 |     | letter, when I give them the letter to give to the mother. But you  |
| 574 |     | know this letter, there's going to be a parent meeting, so you must |
| 575 |     | give your mother and even, you must tell them, there's going to     |
| 576 |     | be a parent meeting tomorrow. What happens, is going to the         |
| 577 |     | meeting maybe the parents won't be able to attend these meetings,   |
| 578 |     | I was lucky because, when they came tomorrow, they are going        |
| 579 |     | to ask me: was my mother here? And the other one becomes very       |
| 580 |     | sad when you respond by saying your mother was not here. And        |
| 581 |     | the other one was shouting: I am going to tell my mother, she was   |
| 582 |     | at home, she's not at work, and she must come here, to come and     |
| 583 |     | hear what the other parents are saying. I am not happy, she must    |
| 584 |     | come here.  |
| 585 | I   | Something of the Grade 1 and Grade R, especially the Grade R,       |
| 586 |     | the teacher becomes their mom. And they go home saying: My          |
| 587 |     | teacher said I must eat only this. And then you say, you can't      |
| 588 |     | eat that, we haven't got money to buy it, But no, my teacher said,  |
| 589 |     | you know? [laughter]. And that is showing you the trust.            |
| 590 | P14 | Just the same, in that week we were doing domestic                  |
| 591 |     | animals and wild animals, for when you are doing animals,           |
| 592 |     | domestic animals nè? Like example of the cow. So I brought          |
| 593 |     | some milk so that we got to taste the cow. So we all [unclear].     |
| 594 |     | I am going to tell my mother to buy milk, we must drink milk.       |

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| 595 |   | And then when we got to the chicken I brought two eggs, I boiled          |
| 596 |   | the eggs, this is what we get from the chicken. The next day,             |
| 597 |   | they came with their eggs, and the other one said, my mother said         |
| 598 |   | the eggs are very expensive and she won't give me an egg.                 |
| 599 |   | No, we are experiencing it. So, at the science we were doing the          |
| 600 |   | boiled eggs and the scrambled eggs. I told them the egg you               |
| 601 |   | can cook different ways. So I mean, it was excited. Now, every            |
| 602 |   | theme we are doing, it's fruit, let us then bring fruit salad. So         |
| 603 |   | they enjoyed that, they learned. So they saw firstly that the eggs        |
| 604 |   | were liquid and now you boiled it and became a solid.                     |
| 605 | I | I must also admit, I love Grade R and Early Childhood                     |
| 606 |   | Development. It's for me lovely and I am glad that we share the           |
| 607 |   | same passion. Okay, let's look what the group said. They said             |
| 608 |   | <i>I need more training about numeracy which you agreed on, I</i>         |
| 609 |   | <i>wish more workshops would be conducted in numeracy, I need</i>         |
| 610 |   | <i>more training about numeracy. Do you see the urgency coming</i>        |
| 611 |   | <i>through? Because I was [unclear] in numeracy, I feel that I am</i>     |
| 612 |   | <i>doing a great job, that was also for me very nice that one, that's</i> |
| 613 |   | <i>why I asked you, are you enjoying it? Because if one is not</i>        |
| 614 |   | <i>comfortable being a teacher you are not going to teach</i>             |
| 615 |   | <i>the learners developmentally. I enjoy it because they implement</i>    |
| 616 |   | <i>it through play and games, I feel very nice and learned more</i>       |
| 617 |   | <i>about numeracy, I am happy because I gained some knowledge</i>         |
| 618 |   | <i>as far as numeracy is concerned, I feel good because I have</i>        |

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| 619 |     | <i>learnt how to implement numeracy at a Grade R level, I am feeling</i>  |
| 620 |     | <i>okay when I got the training. First time I was shocked and there</i>   |
| 621 |     | <i>after I felt free. That's what the group said, and the descriptive</i> |
| 622 |     | <i>paragraph: When teachers were exposed the first time</i>               |
| 623 |     | <i>to numeracy workshops, some teachers felt shy. However, they</i>       |
| 624 |     | <i>gained a lot of knowledge and skills which made them happy</i>         |
| 625 |     | <i>and to be self-confident in implementing numeracy in their</i>         |
| 626 |     | <i>classrooms. There are still numeracy gaps experienced by teachers</i>  |
| 627 |     | <i>and therefore they need to be exposed to more hands-on numeracy</i>    |
| 628 |     | <i>workshops. Do you agree with that?</i>                                 |
| 629 | P14 | Yes.  |
| 630 | I   | Okay. P we have come to the end of this session. I want to                |
| 631 |     | thank you once again, for sharing your knowledge, your skills, your       |
| 632 |     | passion with me. I really appreciate it. Thank you so much.               |

## APPENDIX R

|   |
|---|
| <b>TRANSCRIPT OF SEMI-STRUCTURED INDIVIDUAL INTERVIEW:<br/>PARTICIPANT 15</b> |
|---|

I – Interviewer; P15 - Participant 15

| Line | I/P | Transcription   |
|------|-----|---|
| 1    | I   | Participant, thank you for having this interview with me. May I have your           |
| 2    |     | permission to tape record what we are saying?                                       |
| 3    | P15 | Yes.  |
| 4    | I   | Is it fine with you?  |
| 5    | P15 | Yes.  |
| 6    | I   | Okay, Participant, I have been in your classroom this morning, and it was           |
| 7    |     | very interesting and of course, it was food for my soul to see how lovely you       |
| 8    |     | worked with the kids. But just give me some background information on               |
| 9    |     | yourself. You are a community-based school teacher nè?                              |
| 10   | P15 | Yes.  |
| 11   | I   | But you are at this primary school?   |
| 12   | P15 | Mmm.  |
| 13   | I   | Okay. But does your school has got it's own SGB?                                    |
| 14   | P15 | Yes, they've got their own SGB. I have been in this community based school for      |
| 15   |     | the past nine years.  |
| 16   | I   | For the past nine years?  |
| 17   | P15 | Yes. And it is only last year that they approached the other school, to remove that |
| 18   |     | classroom, so that my learners can be familiar with the school grounds              |

|    |     |  |
|----|-----|--|
| 19 | I   | The school environment?  |
| 20 | P15 | Yes.   |
| 21 | I   | Okay. Okay. Then what happened to the other, was the other one at your house?      |
| 22 | P15 | No, it was not in my house, it was in the community. It was an old beer hall       |
| 23 |     | but we used it as a crèche, a pre-school.  |
| 24 | I   | Okay. So is it still now a crèche?   |
| 25 | P15 | It is still now operating, yes.  |
| 26 | I   | Okay, okay. But you are now at ...   |
| 27 | P15 | It is only the Grade R class that has moved to the school.                         |
| 28 | I   | Okay. So it is easier for them?  |
| 29 | P15 | It is easier for them.   |
| 30 | I   | Okay. Just tell me, how long have you been a pre-school teacher? A grade           |
| 31 |     | R teacher?   |
| 32 | P15 | Nine years.  |
| 33 | I   | Nine years, okay? And tell me, before that?  |
| 34 | P15 | Before that, I wasn't working 'cause from school I went to the Technical           |
| 35 |     | College to do my secretarial course. Then I didn't get work after that. So my late |
| 36 |     | father said, I must try to see what I can do, because there was this old beer      |
| 37 |     | hall which was not used. So that I can start my own. And then I went and           |
| 38 |     | opened my own pre-school.  |
| 39 | I   | You opened your own pre-school?  |
| 40 | P15 | Yes.   |
| 41 | I   | Okay, and then, did you have some training?  |
| 42 | P15 | No!  |

|    |     |  |
|----|-----|--|
| 43 | I   | Nothing?   |
| 44 | P15 | Nothing. And then Centre for Social Development, under Rhodes, came along        |
| 45 |     | and they asked those who have past St 10, who even have training                 |
| 46 |     | for pre-school and then I went there.  |
| 47 | I   | You went there? When was that? In 2000? 1998?                                    |
| 48 | P15 | It was a long time ago.  |
| 49 | I   | And you were with them for two years? Did you do that certificate with them?     |
| 50 | P15 | Yes, I did a certificate with the Centre for Social Development and then,        |
| 51 |     | after that, we wanted to go on and then we asked them, no, we want something,    |
| 52 |     | besides the certificates. And then they say, no, they will talk with Rhodes.     |
| 53 |     | Then Rhodes came along and said, those who passed Stander 10, they can do        |
| 54 |     | their diploma in ECD, in Early Childhood Development. I was one of those and     |
| 55 |     | then I went there for two years part-time. After we did the two years part-time, |
| 56 |     | we received our Diplomas in Education Early Childhood Development. Then the      |
| 57 |     | Department of Education came along and then said, he wants us to do Level IV.    |
| 58 | I   | Was that when the community-based came in, where you got a grant and             |
| 59 |     | toys and they also gave you the training on with SANTS?                          |
| 60 | P15 | Yes, a lot.  |
| 61 | I   | Okay, and then you also did a course with the District Office with Module 1,2    |
| 62 |     | and 3?   |
| 63 | P15 | Yes, we did Module 1, 2 3 and then, we did get certificates from that level IV   |
| 64 |     | Yes.   |
| 65 | P15 | I've got 30 learners in my class.  |
| 66 | I   | Thirty learners?   |

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| 67 | P15 | Ja. I've got drop-outs, about 5 drop-outs.   |
| 68 | I   | Five drop-outs, so it is about 25 now?   |
| 69 | P15 | Yes. I've got 25, I did go to their houses, house-visiting, so that I could see        |
| 70 |     | what was going on. The other one went away with the granny, the other,                 |
| 71 |     | the mother is not getting a grant and does not have a birth certificate. I had to tell |
| 72 |     | The mother go to the social workers, ja, all that stuff. But it is only five that      |
| 73 |     | dropped out.   |
| 74 | I   | Okay. And tell me, the twenty-five, your youngest is about three years old?            |
| 75 | P15 | Yes, my youngest is about three years old.   |
| 76 | I   | How many about? Two? Three?  |
| 77 | P15 | The three year old, is one. And then, three and a half, two.                           |
| 78 | I   | Two three and a half ...   |
| 79 | P15 | And the rest is four, turning five.  |
| 80 | I   | Four turning five?   |
| 81 | P15 | Yes.   |
| 82 | I   | No five turning six?   |
| 83 | P15 | I think it is only one or two. But the most are five.                                  |
| 84 | I   | Okay, goed. That's some background. Thank you for that. What we are going to           |
| 85 |     | do is, we are going to look, remember we had the focus group discussion and at         |
| 86 |     | That focus group discussion I gave your three statements.                              |
| 87 | P15 | Yes, I remember.   |
| 88 | I   | And from there, we had, you had to write on these little cards and we put it and       |
| 89 |     | We grouped it and then you gave me the titles and then we wrote a paragraph.           |
| 90 |     | And we wrote, identified about five titles or themes. The one is Daily                 |

|     |     |   |
|-----|-----|---|
| 91  |     | Programme, the other one is Learner's involvement, Resources, Learning            |
| 92  |     | Outcomes and then Teacher's Experiences. But before we looked what the            |
| 93  |     | group said, because sometimes one voice is then quiet by the group and then I     |
| 94  |     | want to hear your voice. Just tell me, about the daily programme, how do you      |
| 95  |     | feel about the daily programme?   |
| 96  | P15 | The daily programme does have it's pro's and con's. Like the daily                |
| 97  |     | programme is there to guide,  |
| 98  | I   | To guide you?   |
| 99  | P15 | Yes, but sometimes you have to be flexible. And change it then and there so that  |
| 100 | I   | Like today for instance with the rain?  |
| 101 | P15 | Mmm, today it was raining and we could not go outside, so I have to improve       |
| 102 |     | and be flexible and to see what I could do, because the kids got to do something. |
| 103 | I   | That's right. Okay, you say that the daily programme guides you, it is a          |
| 104 |     | framework for you?  |
| 105 | P15 | Yes.  |
| 106 | I   | You've been trained on the daily programme?                                       |
| 107 | P15 | We've been trained, I have been trained.  |
| 108 | I   | On that as well?  |
| 109 | P15 | Yes.  |
| 110 | I   | Okay, and the daily programme, would you also say, it is different from the       |
| 111 |     | Grade 1 class? Because it is more integrated nè?                                  |
| 112 | P15 | Yes.  |
| 113 | I   | You do all three learning programmes at once.                                     |
| 114 | P15 | Yes. It is different from that one.   |

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| 115 | I   | Okay, okay. Something that I have picked up today which I want                     |
| 116 |     | some background information is, I have looked now at your daily                    |
| 117 |     | programme, at one stage [unclear].   |
| 118 | P15 | Okay, just to summarise, we have said the daily programme is a framework           |
| 119 |     | and we need to be integrated and we need to be flexible with the daily             |
| 120 |     | programme. And the daily programme gives us certain rings that are                 |
| 121 |     | developmentally appropriate to the learners, because some of them are whole        |
| 122 |     | class activities and others are individual and small groups né?                    |
| 123 | P15 | Yes.   |
| 124 | I   | Goed. Something about today, which is unique, at the place where you are, the      |
| 125 |     | fact that you are also based at the school, is that you've got an outdoor play,    |
| 126 |     | about eleven o'clock, when the bigger children break, you also break with the      |
| 127 |     | learners?  |
| 128 | P15 | Yes.   |
| 129 | I   | Why is that so? Does the school feel that you must fit in with them?               |
| 130 | P15 | The school feels that we must fit within, so that the learners, they move from my  |
| 131 |     | class to the others, they can be familiar. By the time I arrived, I did not see, I |
| 132 |     | wasn't feeling comfortable, more especially, the kids were small.                  |
| 133 | I   | Yes.   |
| 134 | P15 | So I thought the others would bully them.  |
| 135 | I   | Yes?   |
| 136 | P15 | But now I saw that they are their big brothers and sisters. They usually           |
| 137 |     | come to my class, take them home, so I feel fine.                                  |
| 138 | I   | Feel fine with that?   |

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| 139 | P15 | We are doing one and the same thing.  |
| 140 | I   | Okay, then I am, because I was also a bit worried about it. It is the first time          |
| 141 |     | that I have seen that and that was why it is strange for me. Okay. Let's look             |
| 142 |     | what the group said and then you can fill in for me.                                      |
| 143 | P15 | Mmm.  |
| 144 | I   | The group said <i>It is, we've got to do a morning ring, days of the week,</i>            |
| 145 |     | which you also did today né?  |
| 146 | P15 | Yes.  |
| 147 | I   | And you did the <i>months</i> ?   |
| 148 | P15 | Months of the year.   |
| 149 | I   | <i>Calendar, and then months of the year, seasons of the year, you did not do that</i>    |
| 150 |     | today but I saw your weather chart?   |
| 151 | P15 | Yes.  |
| 152 | I   | We've got that. <i>Movement</i> you did although you couldn't do it outside. And          |
| 153 |     | the weather we spoke about and you did <i>snacktime, creative activities</i> you          |
| 154 |     | did, <i>Music ring</i> , not so much today although you did sing?                         |
| 155 | P15 | Quite a lot. Because that was your movement ding gewees.                                  |
| 156 | I   | There was no <i>birthday</i> and they also said you can do <i>sandpit, a lot of maths</i> |
| 157 |     | <i>and story time</i> . Anything else you want to add here?                               |
| 158 | P15 | About the <i>weather</i> , we went outside, you were not here yet, we went outside        |
| 159 |     | and I took the whole class to go outside and looked at everything, the clouds,            |
| 160 |     | how are they? Is there a wind? Is it raining? Is it warm? Let's look around               |
| 161 |     | and then we looked at the clouds and said what is the colour of the clouds, it's          |
| 162 |     | white and then some said, no, it is not white, it's black. Others said it                 |

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| 163 |     | was going to rain. I said I saw a lightning there, so we did discuss.               |
| 164 | I   | And it was good because again of the flexibility because today it is                |
| 165 |     | overcast with thunderstorms which are not always familiar with us. Okay,            |
| 166 |     | that's very good. In your daily programme, today as well, I saw you                 |
| 167 |     | focused a lot on mathematics?   |
| 168 | P15 | Mmm.  |
| 169 | I   | Is that everyday or do you do sometimes Life Skills in that time?                   |
| 170 | P15 | Every day.  |
| 171 | I   | Every day?  |
| 172 | P15 | Ja, I feel it that they must count every day because in life, they will be counting |
| 173 |     | every day. So I want them to experience every day an activity about                 |
| 174 |     | counting, doing, using those maths language, plus, it is one plus one, I was doing  |
| 175 |     | it in Xhosa.  |
| 176 | I   | Ja, I've noticed that and it was very interesting for me. We will come back to      |
| 177 |     | that but while we are busy with this, it was interesting for me, how you did it.    |
| 178 |     | You had those pom-poms, home-made, which are lovely and soft, which I said,         |
| 179 |     | made the children feel secure but then you had two and you brought another two,     |
| 180 |     | so it was actually doubling.  |
| 181 | P15 | Yes.  |
| 182 | I   | Have you ever been trained on that, how to do that or was it something you          |
| 183 |     | decided yourself?   |
| 184 | P15 | I wasn't trained on that.   |
| 185 | I   | You were not trained on that, so you decided yourself to do that?                   |
| 186 | P15 | Since their age, I do it in simpler form. So that they can move with me. I must     |

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| 187 |     | not try to use the big words, they will be frightened, they won't understand. So I      |
| 188 |     | it was my idea to just to do it that way so that they can go with me.                   |
| 189 | I   | Okay. Do you feel you would like to have some more training on that?                    |
| 190 | P15 | Mmmm.   |
| 191 | I   | How to do numeracy on a hands-on?   |
| 192 | P15 | Yes.  |
| 193 | I   | Do you feel that is a gap?  |
| 194 | P15 | There is that gap. Because sometimes, I ran out of ideas. I would like to               |
| 195 |     | have that training. You see, if you do something like that, don't leave me out.         |
| 196 | I   | Okay, no, that is the aim of this study, to say, what are the gaps that you             |
| 197 |     | also experience, how can we advise universities and training people to focus on         |
| 198 |     | that. Okay. Let's look at the descriptive paragraph. We will come back to the           |
| 199 |     | maths thing when we do planning, the Learning Outcomes.                                 |
| 200 | P15 | Okay.,  |
| 201 | I   | We said <i>The daily programme is to guide teachers and learners in presenting</i>      |
| 202 |     | <i>activities which are integrated. The daily programme is a framework which</i>        |
| 203 |     | <i>gives learners security as well as let them practical experiences time movement.</i> |
| 204 |     | <i>They know what to expect during each activity of the daily programme. That</i>       |
| 205 |     | was nice when you told them about the [unclear] in your class and when you said         |
| 206 |     | collect and put away, so that they can focus on another activity.                       |
| 207 |     | That is a practical experience of the movement of time né?                              |
| 208 | P15 | Yes.  |
| 209 | I   | Goed. <i>The daily programme assists teachers in their preparation and</i>              |
| 210 |     | <i>planning for each of the sections of the daily programme and the accompanying</i>    |

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| 211 |     | <i>assessment.</i>   |
| 212 | P15 | I want to add something.   |
| 213 | I   | Yes?   |
| 214 | P15 | From that collecting. It give them that sense of responsibility when you have    |
| 215 |     | done this, you have to take it there. When you are done with this one, take it   |
| 216 |     | there So that sense of responsibility ...  |
| 217 | I   | Comes in and that is also integration with Life Skills né? It comes so           |
| 218 |     | spontaneously, that is so nice in Grade R né!                                    |
| 219 | P15 | Yes [laughter].  |
| 220 | I   | Goed. <i>The daily programme is creating a balance between teacher and</i>       |
| 221 |     | <i>learner-directed activities.</i>  |
| 222 | P15 | Yes.   |
| 223 | I   | I must say I found today that most of the activities were teacher-directed       |
| 224 |     | where you planned it and initiated it?   |
| 225 | P15 | Mmmm.  |
| 226 | I   | Are there times where you let them plan and do it? The only thing where I really |
| 227 |     | experienced learner-directed activities, were when they did free-play. Okay,     |
| 228 |     | we didn't have free-play outside because of the rain. So we can't use that as a  |
| 229 |     | totalness, but are there any times in your class where you take guidance from    |
| 230 |     | them? Or is it mostly you that take the ...                                      |
| 231 | P15 | I don't want to lie, no, I always, but, beside that, I usually let them talk     |
| 232 |     | about their experiences but it is something that I brought up and then they can  |
| 233 |     | come in. But eh-eh, I never ...  |
| 234 | I   | Okay, can I ask you, do you feel that is a need as well?                         |

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| 235 | P15 | There is a need to get ...  |
| 236 | I   | Have you ever been trained on it?   |
| 237 | P15 | I don't think so.   |
| 238 | I   | You don't think so?   |
| 239 | P15 | I think there is a need and I wish I could be part of that, so that I can learn them, |
| 240 |     | do whatever.  |
| 241 | I   | Take the guidance from them?  |
| 242 | P15 | Take the guidance from them, yes.   |
| 243 | I   | Our next one, that we identified, was <i>Learner Involvement</i> . And we briefly     |
| 244 |     | I am fine with learner involvement because, when they are involved,                   |
| 245 |     | spoke now about Learner –directedness. But Learner Involvement, tell me               |
| 246 |     | how do you experience learners' involvement? How do you feel about it?                |
| 247 | P15 | when they are participating hands-on, they just learn.                                |
| 248 | I   | Practically?  |
| 249 | P15 | Practically. If they are involved, they become so confident about that, because       |
| 250 |     | one knows I can do this. And when somebody didn't know what, we can help              |
| 251 |     | and I have noticed that, I don't know how to put it, but, if the learner, if one      |
| 252 |     | of them, does not understand, if one of them helped.                                  |
| 253 | I   | Peer learning? A friend is learning him?  |
| 254 | P15 | Yes.  |
| 255 | I   | They clicked it? But that's very true. The best learning takes place when             |
| 256 |     | a learner teaches another one, when they learn from one another. I saw,               |
| 257 |     | when you did movement, when they battled with the cross-over, you, at one             |
| 258 |     | stage, asked the other learner to show him by using the other learner's limbs how     |

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| 259 |     | to do it.  |
| 260 | P15 | Yes, there is a story I would like to share. We were doing that counting,            |
| 261 |     | we do it everyday. And then there's that small one, that one, usually wants to cry   |
| 262 |     | And then there was this one and she was absent today. You know miss, let's           |
| 263 |     | sing so that he cannot cry..   |
| 264 | I   | So they are also very empathetic and in tune with each other's needs and             |
| 265 |     | feelings? And they want to console?  |
| 266 | P15 | Yes. So, I said no, what song. Miss there is that song you like to sing from my      |
| 267 |     | church. Then I sang the song. And they know the song. And the one who was            |
| 268 |     | crying, stopped and then, I was leading the song, come I'll show you.                |
| 269 | I   | Ag shame. And then, did she feel better because she could do it?                     |
| 270 | P15 | Yes. So every time she is going to comfort, she wasn't coming today, and             |
| 271 |     | that one is not at school today. So it is like ...                                   |
| 272 | I   | They are complimenting one another?  |
| 273 | P15 | Yes. It is.  |
| 274 | I   | The stronger takes the weaker?   |
| 275 |     | In various ways I didn't think of.   |
| 276 |     | But that is also a learner-directedness, what we were just talking, a learner direct |
| 277 |     | where you took the lead from a learner. They asked let's do this                     |
| 278 | P15 | Okay.  |
| 279 | I   | It happens very spontaneously through the day but that was very nice for me.         |
| 280 |     | I just want to say, you said to me, the learner was crying, because what I have      |
| 281 |     | noticed today, the learners are not scared of you. I found them actually very        |
| 282 |     | relaxed which say to me they know what is expected of them. Although I did           |

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| 283 |     | find that your class is very organized and disciplined. Do you feel                 |
| 284 |     | discipline is very important?   |
| 285 | P15 | I feel it is very important. If you are not disciplined, they must know and         |
| 286 |     | learn it from the very young age, because sometimes when we disciplined             |
| 287 |     | them by saying, when I give you something, you must say thanks. Even at home,       |
| 288 |     | even in the street, if somebody, even you when one doesn't have bread, and          |
| 289 |     | one gives you, she must say thank you.  |
| 290 | I   | Good manners, ja.   |
| 291 | P15 | If there is something wrong, say sorry. Here at school, every where.                |
| 292 |     | Discipline, discipline, everywhere.   |
| 293 | I   | It is very important and it is also a framework. It also makes you feel             |
| 294 |     | safe, because they know what to expect from you.                                    |
| 295 | P15 | Yes.  |
| 296 | I   | Okay, goed. Let's look at the <i>Learner Involvement</i> and what we put down       |
| 297 |     | here. We said: <i>Working as a team or a group</i> , I must say but I think it is   |
| 298 |     | because you didn't have movement outside, I didn't see them working as a            |
| 299 |     | group. They sat in groups né, at the table, but each was doing their own thing.     |
| 300 |     | The only time I saw that, was when they played blocks. Where they                   |
| 301 |     | spontaneously built onto one another, okay? But there is nothing wrong, it can      |
| 302 |     | be individual, and it can be in a group. It depends on [unclear]. It is             |
| 303 |     | <i>difficult to count backwards</i> , somebody said that for learner's involvement. |
| 304 |     | Have you experienced that as well?  |
| 305 | P15 | Yes. And as a result I forget even to do that.                                      |
| 306 | I   | Because you are also looking for different ways to do it?                           |

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| 307 | P15 | Yes.  |
| 308 | I   | Okay. I must say, at one school I saw a nice activity, how one can do it.           |
| 309 |     | By building blocks, and then show them, the first step is number one, and you       |
| 310 |     | put number one there. And then you build two blocks, and then you put a             |
| 311 |     | number two.   |
| 312 | P15 | Alright.  |
| 313 | I   | And then, you go backwards and say, okay now, from the top one, let's go            |
| 314 |     | back, 10.9, 8 7, 6... Maybe you can do it at your school's steps, because           |
| 315 |     | you've got steps. You put at the first step a number 1 and say, okay, let's         |
| 316 |     | do number 1. And you go up and you go down like that. That's perhaps a              |
| 317 |     | different idea but that is also where you need more hands-on experiences né?        |
| 318 | P15 | Yes.  |
| 319 | I   | Goed. <i>I think it is good for learners, learner involvement, which you also</i>   |
| 320 |     | <i>said to me. Some learners are not confident, they need help and support</i>      |
| 321 |     | <i>but others are.</i> That's what you have just told me now, with that example     |
| 322 |     | you gave about the child that cried né? <i>Active involvement is</i>                |
| 323 |     | <i>very important, communication is very much, yes, They must take turns as</i>     |
| 324 |     | <i>well, you have just spoke about good manners. They must enjoy it, that I</i>     |
| 325 |     | must say, I have seen today, especially the story-telling. They enjoyed it and      |
| 326 |     | laughed quiet a lot. <i>And they must share as well né? Goed. Learners are</i>      |
| 327 |     | <i>helping each other in terms of counting and drawing the number of</i>            |
| 328 |     | <i>objects needed.</i> That you said when you did the counting, they need whatever. |
| 329 |     | <i>They must also bring their ideas and collect whatever.</i> Goed. Anything else   |
| 330 |     | you want to add there?  |

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| 331 | P15 | I think it is covered.  |
| 332 | I   | It is covered?  |
| 333 | P15 | Yes.  |
| 334 | I   | Let's see what the descriptive paragraph said: <i>Learner involvement needs</i>         |
| 335 |     | <i>that learners are actively involved and communicating ideas, feelings</i>            |
| 336 |     | <i>and experiences. Learners' involvement can show you which learners are having</i>    |
| 337 |     | <i>barriers in learning for example numeracy - they use resources but cannot count</i>  |
| 338 |     | <i>orally. But cannot demonstrate counting in two's with counters. That's what</i>      |
| 339 |     | <i>you've said to me né? They cannot count backwards because if you give them</i>       |
| 340 |     | <i>the objects, they don't know how to do it, but they can do it orally?</i>            |
| 341 | P15 | Yes. The others [unclear] but when it comes to take one.                                |
| 342 | I   | One to one correspondence?  |
| 343 | P15 | Yes, they cannot do it.   |
| 344 | I   | They cannot do it. So it's more, they've got like a rhyme, parrot like, but they        |
| 345 |     | don't know how to do it physically né?  |
| 346 | P15 | Yes.  |
| 347 | I   | Okay. <i>Learner's involvement is also about sharing resources and ideas in</i>         |
| 348 |     | <i>a group situation as well as peer learning, which we spoke about, where a</i>        |
| 349 |     | <i>learner can assist another learner in grasping a learning concept. Counting</i>      |
| 350 |     | <i>backwards, that's learner involvement entails that a learner is able to work in</i>  |
| 351 |     | <i>a group but also to work sometimes independently as an individual. When</i>          |
| 352 |     | <i>learners are working in a group, the teacher is able to identify whether</i>         |
| 353 |     | <i>the learner is confident or experiencing learning barriers in a group situation,</i> |
| 354 |     | <i>but the learner is confident or experiencing learning barriers in a group</i>        |

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| 355 |     | <i>situation, but also when he is working alone. The crux of learner involvement</i>     |
| 356 |     | <i>means that all learning activities need to be learner-centred, and learner-paced.</i> |
| 357 | P15 | Yes.   |
| 358 | I   | Okay, that comes under learner-centredness né?   |
| 359 | P15 | Yes.   |
| 360 | I   | That you take the lead from them as well. Goed. Our next one is about                    |
| 361 |     | <i>Resources.</i> Tell me about your resources.  |
| 362 | P15 | At least, at least, as compared to previous years, I've got resources.                   |
| 363 | I   | You've got resources.  |
| 364 | P15 | The Department of Education has been asked and then, we usually, like in my              |
| 365 |     | classroom, I'll show you, that if you want to do something, just tell the learners       |
| 366 |     | and give the learners instructions so that they can tell their parents and then          |
| 367 |     | we've got ...  |
| 368 | I   | Also home-made toys that the parents made?   |
| 369 | P15 | Yes.   |
| 370 | I   | That was lovely, that's lovely. So you've got bought ones and, do you feel               |
| 371 |     | resources are very important?  |
| 372 | P15 | They are very important so that they can make the learner interested, interesting        |
| 373 |     | and hands-on.  |
| 374 | I   | Concrete?  |
| 375 | P15 | Yes, yes. If you've got something, an object to grasp, at least the learner              |
| 376 |     | will have an idea of it.   |
| 377 | I   | And they learn through play?   |
| 378 | P15 | Yes, so resources are needed.  |

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| 379 | I   | Do you feel comfortable that you 've got more or less ...                             |
| 380 | P15 | At least more or less, as compared to previous years, at least we have.               |
| 381 | I   | But you will always need more?  |
| 382 | P15 | I will always need more.  |
| 383 | I   | Puzzles, I did not see any puzzles today?   |
| 384 | P15 | There were puzzles.   |
| 385 | I   | There were puzzles, but you did not put it out today?                                 |
| 386 | P15 | Yes.  |
| 387 | I   | Do you normally put it out?   |
| 388 | P15 | Not usually, eh-uh.   |
| 389 | I   | Why not, if I may ask?  |
| 390 | P15 | I do not want to lie, but I find it very difficult to                                 |
| 391 | I   | get them involved?  |
| 392 | P15 | To get them involved, really. There were ladies, there was that lady, that usually    |
| 393 |     | comes on Wednesdays, then I ask them to help me with the puzzles. And then we         |
| 394 |     | divided the learners and the other lady can take the other group and the other lady   |
| 395 |     | take 'cause on my own, I cannot [unclear]. So ...                                     |
| 396 | I   | So these ladies, do they build the puzzles with the learners then? Do they            |
| 397 |     | assist the learners in building the puzzles?  |
| 398 | P15 | Yes, the assist them and I can see that our, more especially our teachers, are not    |
| 399 |     | familiar with the puzzles.  |
| 400 | I   | Because you never had exposure to it as children?                                     |
| 401 | P15 | Yes, and then we usually buy the toys, we don't usually buy puzzles. That's why,      |
| 402 |     | it's new, they just take the pieces, the other one wants to eat the pieces, the other |

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| 403 |     | Put it in the [unclear]. So I'm not that involved in puzzles.                            |
| 404 | I   | So, would you say you need some guidance?  |
| 405 | P15 | Yes.   |
| 406 | I   | Because puzzles are very important. It is important for mathematical concepts            |
| 407 |     | because it is, a lot of things lie there and you bring it, you build, so you are         |
| 408 |     | building a picture, a finished product at the end that makes sense. So they need         |
| 409 |     | to look for small little things, foreground, background and then go... so it is very     |
| 410 |     | important but you say to me you need some assistance and guidance in there.              |
| 411 | P15 | Yes, I do.   |
| 412 | I   | Okay, that's good. Let's see what the group said. They said: <i>We are</i>               |
| 413 |     | <i>making use of manipulatives.</i> Okay, do you make use of manipulatives like          |
| 414 |     | threading and ...  |
| 415 | P15 | Yes, I do.   |
| 416 | I   | You do that? With the beads and pegboards?   |
| 417 | P15 | I don't have a pegboard.   |
| 418 | I   | You don't have a pegboard?   |
| 419 | P15 | The last time I used a string, they must come with the straws, we cut those              |
| 420 |     | straws and the thread through it. So I need manipulatives.                               |
| 421 | I   | You need manipulatives where they use their fingers?                                     |
| 422 | P15 | Yes.   |
| 423 | I   | Goed. <i>A scale</i> , okay, that's something you didn't have today, but that's resource |
| 424 |     | né?  |
| 425 | P15 | Ja.  |
| 426 | I   | Okay, goed. <i>Play dough</i> ?  |

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| 427 | P15 | I don't have.   |
| 428 | I   | You don't have. Do you've got a recipe of play dough?   |
| 429 | P15 | It's years that I've got the recipe.  |
| 430 | I   | But you don't make use of that?   |
| 431 | P15 | I don't even try to.  |
| 432 | I   | Why not?  |
| 433 | P15 | Laziness. [Laughter].   |
| 434 | I   | Is dit? Play-dough is very important for the fingers and also for the formation               |
| 435 |     | of the symbols. That is something that I liked about you, you let them count,                 |
| 436 |     | you let them trace and then you let them make it in the air and then before                   |
| 437 |     | they go down to make it, you let them build it with the dough as well, that is                |
| 438 |     | actually very important hoor?   |
| 439 | P15 | Yes.  |
| 440 | I   | Okay, <i>Use objects to count</i> , which you did today. <i>Sequencing</i> , you didn't focus |
| 441 |     | on that today né? Do you normally focus on sequencing?  |
| 442 | P15 | The other day, ...It's coming up?   |
| 443 | I   | Not always?   |
| 444 | P15 | It's coming up spontaneously.   |
| 445 | I   | You don't plan for it?  |
| 446 | P15 | I don't plan it.  |
| 447 | I   | And <i>Patterns</i> ?   |
| 448 | P15 | Patterns I ...  |
| 449 | I   | With patterns, also sequencing comes up né? Patterns like, a circle, triangle,                |
| 450 |     | whatever. Do you need some guidance there?  |

|     |     |  |
|-----|-----|--|
| 451 | P15 | I need some guidance there.  |
| 452 | I   | Goed. And <i>Bright colours</i> , you spoke about that in your story né?                 |
| 453 | P15 | Mmm.   |
| 454 | I   | Goed, then we spoke about <i>Bottle tops</i> . You showed me those lovely music          |
| 455 |     | instruments. We said you can use <i>swings for resources as well, stones,</i>            |
| 456 |     | <i>using cubes as objects, puzzles,</i> we spoke about, <i>I usually use learners as</i> |
| 457 |     | <i>resources</i> , which you also did because when you asked them the body parts né?     |
| 458 | P15 | Mmmm.  |
| 459 | I   | You can also make use of <i>tyres, straws</i> , you just told me, <i>And I use</i>       |
| 460 |     | <i>counting objects like bottle tops, counters</i> and those board game. Anything you    |
| 461 |     | would like to add there? Are you covered?  |
| 462 | P15 | I am covered.  |
| 463 | I   | Let us just look at the descriptive paragraph. <i>Resources can be used to make</i>      |
| 464 |     | <i>numeracy experiences for learners more interesting.</i>                               |
| 465 | P15 | Yes.   |
| 466 | I   | <i>The three dimensional resources can be used concretely in order for learners</i>      |
| 467 |     | <i>to explore numeracy concepts.</i>   |
| 468 | P15 | I would like to, I don't know how to put it, but the guidance for the                    |
| 469 |     | three-dimensional.   |
| 470 | I   | Guidance for the three-dimensional? That you know what is the ... What I                 |
| 471 |     | would like the learners to know as well, difference between 2-D and 3-D?                 |
| 472 |     | Very hands-on né?  |
| 473 | P15 | What I would like the learners to know as well.  |
| 474 | I   | Okay, ja, the big thing is, if you are trained and you know, then you will               |

|     |     |   |
|-----|-----|---|
| 475 |     | implement it. And if you know why you must do it, then you will implement it.         |
| 476 | P15 | Yes.  |
| 477 | I   | You know, sometimes one is trained, but one forgets, even me. That's why              |
| 478 |     | it is so nice for me to come to your class again, and Oh, I forgot about that, you    |
| 479 |     | know? One forgets, that is human, but sometimes, but we will speak about the          |
| 480 |     | training just now. It is more theoretical than it is hands-on, sometimes.             |
| 481 | P15 | Okay.   |
| 482 | I   | But you prefer more hands-on?   |
| 483 | P15 | More hands-on.  |
| 484 | I   | Practical ideas, give me ideas?   |
| 485 | P15 | Yes.  |
| 486 | I   | Okay, goed. <i>However resources okay goed, we've spoken about that.</i>              |
| 487 |     | <i>Numeracy concepts [unclear] before resources as two-dimensional puzzles and</i>    |
| 488 |     | <i>worksheets are introduced. Touching and feeling concrete is very important for</i> |
| 489 |     | <i>numeracy development.</i>  |
| 490 | P15 | Yes.  |
| 491 | I   | That's why we also add the dough né? It is very important. I want to                  |
| 492 |     | come back to this thing of the worksheets. I have seen today you have put             |
| 493 |     | out three worksheets. Do you put out everyday three worksheets?                       |
| 494 | P15 | Yes, different worksheets.  |
| 495 | I   | Different worksheets?   |
| 496 | P15 | Yes. Every day, they must do different, you see today, they didn't change.            |
| 497 | I   | Ja?   |
| 498 | P15 | I like to do it like that. Tomorrow they will be busy with that activity, I           |

|     |     |   |
|-----|-----|---|
| 499 |     | will just change them. I change them, the learners. Yes.                        |
| 500 | I   | They rotate on the next day?  |
| 501 | P15 | On the next day, yes.   |
| 502 | I   | So at the end of the week, everybody did all three worksheets?                  |
| 503 | P15 | Yes.  |
| 504 | I   | Okay. I must say, do you find, this is just a question that I am asking you, Do |
| 505 |     | you find that that is stimulating enough? Because some of the learners          |
| 506 |     | finished quickly.   |
| 507 | P15 | Mmm.  |
| 508 | I   | And they had to wait for the others.  |
| 509 | P15 | It is not stimulating, no.  |
| 510 | I   | Would you like to have more than one activity?                                  |
| 511 | P15 | Yes.  |
| 512 | I   | Why don't you do it like that? Do you need guidance how to do it?               |
| 513 | P15 | I need guidance on how to do it, I can try and plan it. Because there is this   |
| 514 |     | planning business. Sometimes you don't know what to do. So, sometimes,          |
| 515 |     | yes, I need guidance.   |
| 516 | I   | On that? How to put more in, because ...  |
| 517 | P15 | Interesting.  |
| 518 | I   | Interesting, and learner-centred activities because when they go to grade 1,    |
| 519 |     | they are going to do more than one thing for a long time or period. I           |
| 520 |     | didn't notice any painting?   |
| 521 | P15 | We didn't do them.  |
| 522 | I   | Do you do normally, do you've got paint?  |

|     |     |   |
|-----|-----|---|
| 523 | P15 | I've got paint. I've got a lot. We usually do the painting but today we didn't do |
| 524 |     | that.   |
| 525 | I   | Okay, something else that I also picked up, when you had those fishes, you put    |
| 526 |     | the glue on the pictures for the learners, you painted it on. Why, if I may ask?  |
| 527 | P15 | I usually do it because they mess. But I usually tell them, it must be you, who   |
| 528 |     | do it but guys, I cannot eh-eh, let me just do it for you. Well, I know it is     |
| 529 |     | wrong, but I do it. But ...   |
| 530 | I   | Just for the mess sake? Okay, but that's something you've got to look into, hoor, |
| 531 |     | At one stage. Then I've seen, when I looked through the learners' portfolio's.    |
| 532 |     | Those books, what do you call it? Show and Tell? I saw a lot of cutting           |
| 533 |     | activities, so you do a lot of cutting with the learners?                         |
| 534 | P15 | I didn't see that you were in those books?  |
| 535 | I   | I think you went quickly out to the toilet.                                       |
| 536 | P15 | Okay. [laughter]  |
| 537 | I   | I want to come to <i>Learning Outcomes</i> and that, we've started on that,       |
| 538 |     | we spoke very briefly about the planning and about the activities. Just tell me,  |
| 539 |     | how do you feel about the Learning Outcomes. There are five. We speak             |
| 540 |     | now about Mathematics Outcomes, there are five. The first one is about counting   |
| 541 |     | and algebra nê? The second one is about patterns. The third one is about          |
| 542 |     | shapes and space and the fourth one is measurement, which you did today.          |
| 543 |     | And the fifth one you did counting, but the fifth one is about data handling.     |
| 545 |     | And under that, we've got lots of little bullets. Do you feel you cover all the   |
| 546 |     | bullets and all the outcomes?   |
| 547 | P15 | Mmm-mmm.  |

|     |     |  |
|-----|-----|--|
| 548 | I   | Not?   |
| 549 | P15 | Not.   |
| 550 | I   | Why not, if I may ask? Do you need more guidance?  |
| 551 | P15 | I need more guidance.  |
| 552 | I   | Hands-on training?   |
| 553 | P15 | Yes, because it is a little bit confusing, sometimes I am not sure whether                 |
| 554 |     | I do the right thing or what is it I am doing, I need ...                                  |
| 555 | I   | You need more guidance?  |
| 556 | P15 | Yes.   |
| 557 | I   | Do you know where to get the Learning Outcomes? From the policy documents                  |
| 558 |     | né?  |
| 559 | P15 | Yes.   |
| 560 | I   | But, and from your planning. But how to implement, you know, it is very                    |
| 561 |     | interesting because that is why I am doing this study.                                     |
| 562 | P15 | Okay.  |
| 563 | I   | Because I wasn't trained, I was trained as a pre-school teacher, not as a Grade 1          |
| 564 |     | teacher. And then they brought all these stuff in, like data handling, like, because       |
| 565 |     | I have seen, you did now, doubling, how are you going to do halving and                    |
| 566 |     | those things? And I thought to myself, I don't know how I am going to do it, how           |
| 567 |     | much more the teachers? And that's why I am doing this study, to find out                  |
| 568 |     | where are your needs and how are you implementing numeracy, so that we                     |
| 569 |     | can look further into that.  |
| 570 | P15 | Okay. Goed. The Learning Outcomes, let's look what they said here. We                      |
| 571 |     | said <i>learners can count 1 to 10 orally</i> , that's one of the assessment standards and |

|     |     |   |
|-----|-----|---|
| 572 |     | you focused a lot on counting, you told me. <i>Weight</i> , you did today with full and       |
| 573 |     | less, <i>days of the month</i> , that's the measurement we do, measurement comes              |
| 574 |     | in very strongly, which you also did today. Interesting for me today, with the                |
| 575 |     | measurement, you had only one learner measuring whilst you told the learner                   |
| 576 |     | what to do. You verbalized to the other learners. Are you doing everyday                      |
| 577 |     | measurement, because your theme was water?  |
| 578 | I   | Not every day.  |
| 579 | P15 | Not every day. Because the theme was about measurement for today. And I did                   |
| 580 |     | not focus because even tomorrow I have to do it again so that others can have a               |
| 581 |     | chance to do it.  |
| 582 | I   | Okay, goed. <i>Because most of the time I use counting</i> , that's what you also             |
| 583 |     | said. <i>Always you count, volume</i> , that you said full/half, <i>days of the week</i> ,    |
| 584 |     | <i>shapes</i> , we didn't do that, <i>counting again, counting is good</i> and we spoke about |
| 585 |     | <i>colour</i> , you very briefly did that when we spoke about your aim.                       |
| 586 | P15 | Yes, but if you did see the books, we did speak about colours, it was rain for                |
| 587 |     | today.  |
| 588 | I   | Yes, I have noticed that and you integrated spontaneously.                                    |
| 589 | P15 | Yes.  |
| 590 | I   | Okay, but you say you do not cover all the learning outcomes and assessment                   |
| 591 |     | standards and you need more guidance on that?   |
| 592 | P15 | Yes.  |
| 593 | I   | Okay, goed. Let's go on to the descriptive paragraph: <i>The learning outcomes</i>            |
| 594 |     | <i>indicate what learners must be able to achieve by demonstrating their</i>                  |
| 595 |     | <i>understanding and skills based on the topic as well as the assessment</i>                  |

|     |     |  |
|-----|-----|--|
| 596 |     | <i>standards that the learners will be assessed on. Learning Outcomes are</i>          |
| 597 |     | <i>developing the learners numeratically in order for them to be able to count and</i> |
| 598 |     | <i>to measure and do all those things. The learning outcomes and assessment</i>        |
| 599 |     | <i>standards guide the teacher what learners must be able to achieve and</i>           |
| 600 |     | <i>therefore guiding teachers to plan for such learning activities. Which you</i>      |
| 601 |     | <i>actually cannot do now, because you don't understand all of them né?</i>            |
| 602 | P15 | I need that guidance.  |
| 603 | I   | Just tell me, planning, how do you feel about planning?                                |
| 604 | P15 | The planning, I feel not, it is too much, it's like you must do writing instead of     |
| 605 | I   | doing it practically?  |
| 606 | P15 | Yes.   |
| 607 | I   | So you would, actually like to have it much more simpler?                              |
| 608 | P15 | Yes!   |
| 609 | I   | But do you feel planning is important?   |
| 610 | P15 | But planning, it must be there so that it guides you.                                  |
| 611 | I   | So that you know what you must do?   |
| 612 | P15 | Yes.   |
| 613 | I   | And that your teaching covers everything?  |
| 614 | P15 | Yes.   |
| 615 | I   | But you need more guidance and how to do it practically?                               |
| 616 | P15 | Because when I do it alone or today with F, sometimes I get                            |
| 617 |     | confused, oh no, but in the meantime, although we get confused, when trying            |
| 618 |     | to plan, I am confident when I am doing something in the class. I know it's ...        |
| 619 | I   | You know what you want to do?  |

|     |     |  |
|-----|-----|--|
| 620 | P15 | Yes.   |
| 621 | I   | You've got it in your head,  |
| 622 | P15 | Yes, I've got it in my head  |
| 623 | I   | But to put it down on paper, that's why I say, maybe they must think of            |
| 624 |     | a simpler way, 'n baie simpler way to do it.                                       |
| 625 | P15 | Yes!   |
| 626 | I   | Because what you've got in your head, is what we call a mind-map. I think I        |
| 627 |     | explained to the other participant. This theme is Spring. And you know under       |
| 628 |     | Water you are going to do measurement, you are going to do counting and you        |
| 629 |     | are going to do this counting song and you are going to do that movements.         |
| 630 |     | Much simpler.as what they described.   |
| 631 | P15 | Yes.   |
| 632 | I   | Okay, goed. Let's look at our next one. Our next one is about                      |
| 633 |     | <i>Teacher's experiences</i> and we have touched on that already. Teacher's        |
| 634 |     | experiences about training that you've had. Let's start off with your first        |
| 635 |     | training. As you have told me, you were not originally a teacher, you were         |
| 636 |     | actually trained as a secretary. And then you started your pre-school, you         |
| 637 |     | created your own job. Do you like teaching, let me ask you this first?             |
| 638 | P15 | It is in my blood.   |
| 639 | I   | It is in your blood?   |
| 640 | P15 | I think I am a born teacher.   |
| 641 | I   | You're a born teacher? But do you like it? Are you passionate about it?            |
| 642 | P15 | I am passionate and if I can tell you, I am a single parent, I've got an 11        |
| 643 |     | year old son, I was his first teacher. All the pre-school years, I was his teacher |

|     |     |  |
|-----|-----|--|
| 644 |     | and when he went to school I wasn't that confident but oh, he was just fine.         |
| 645 |     | And he was here in D [name of school], he is now in PE, busy with Grade 4.           |
| 646 |     | His teachers said he is so confident, he won, what do you call these things, merit   |
| 647 |     | awards, he is brilliant. And then I thought to myself, no, I am a good teacher.      |
| 648 |     | Because look what my child can do. So, I like teaching. I am in love with            |
| 649 |     | teaching..   |
| 650 | I   | That's all you want to do?   |
| 651 | P15 | It is all I want to do.  |
| 652 | I   | Yes, I can see that, I can see that passion coming through and the commitment.       |
| 653 |     | Okay, let's talk about your first teacher experiences of training. The first one was |
| 654 |     | with Centre of Social Development when you did that two years certificate.           |
| 655 |     | How did you find that? Did you learn quite a lot? They taught you more or less       |
| 656 |     | the daily programme?   |
| 657 | P15 | The daily programme, they taught us almost everything we need to know.               |
| 658 |     | More especially, for myself. Because I did not know where to start?                  |
| 659 |     | What must I do? They did give us a clear direction. They usually come to our         |
| 660 |     | schools to see how did we implement, were there any problems that you                |
| 661 |     | have encountered because in the classroom it is good but when you have               |
| 662 |     | to implement, eh-eh, it's another story. Then they will come and visit you           |
| 663 |     | and support you, all the way through with what they were doing.                      |
| 664 | I   | Was this before this new curriculum came in that you went to this ...?               |
| 665 | P15 | Yes, it was before that.   |
| 666 | I   | Okay, since you have finished your certificate with them, do they still come out?    |
| 667 | P15 | Yes, they did, they usually come to my school. They still come to me, because        |

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|-----|-----|---|
| 668 |     | he last time, this year, we were doing development. I went and attend the       |
| 669 |     | five days training, so they still ...   |
| 670 | I   | So, there are still some courses that you attend with them? Just for enrichment |
| 671 |     | né? Not for a certificate or what else that you still?                          |
| 672 | P15 | For enrichment because it was not for certification. But I saw the need that    |
| 673 |     | I must go there.  |
| 674 | I   | Because you wanted to be more stimulated?                                       |
| 675 | P15 | I wanted to be developed.   |
| 676 | I   | Okay, so you've still got that contact?   |
| 677 | P15 | Strong contact.   |
| 678 | I   | From there you went to Rhodes and you did the two year ECD diploma?             |
| 679 | P15 | In that two years, yes.   |
| 680 | I   | Okay, also part-time?   |
| 681 | P15 | Yes, part-time.   |
| 682 | I   | Were the people from Centre for Social Development involved in this             |
| 683 |     | diploma? Did they train you as well or not? Were it different people?           |
| 684 | P15 | It was different people.  |
| 685 | I   | Okay, how did you find that training?   |
| 686 | P15 | The training was tough, the training was more theoretical than                  |
| 687 | I   | the practical of  |
| 688 | P15 | Yes, and then there was, I gained more confidence because you were              |
| 689 |     | more into teaching, teaching behavior, what must you do, I mean it was          |
| 670 |     | more concrete. We were doing assignments. Then the last year the teacher        |
| 671 |     | came and observed you in the class .  |

|     |     |  |
|-----|-----|--|
| 672 | I   | Okay, how did you find, you also said you gained a lot of confidence, so           |
| 673 |     | you were happy about that?   |
| 674 | P15 | Was happy and it was my dream to become a teacher and have that diploma.           |
| 675 |     | And then that course gave me what I wanted in life.                                |
| 676 | I   | Okay, goed. Your needs were addressed. From there, the Department came in          |
| 677 |     | and we started with, let's do first the ECD courses that you did there, the Module |
| 678 |     | 1,2 and 3?   |
| 679 | P15 | And 4.   |
| 680 | I   | and 4 as well?   |
| 681 | P15 | Yes.   |
| 682 | I   | I did not know that 4 was out already.   |
| 683 | P15 | It is.   |
| 684 | I   | How did you find that?   |
| 685 | P15 | The one from the Department of Education?  |
| 686 | I   | Ja, the one of L, the KZN one, the ECD one and the SANTS one.                      |
| 687 | P15 | This one from the Department of Education, it was in the first place,              |
| 688 |     | accredited. Yes, that was what we were told that our Level IV's are                |
| 689 |     | accredited. And then it was more about prior knowledge. So at least,               |
| 690 |     | you had some knowledge and then add some more things so that I can become          |
| 691 |     | more, I gained more confidence. And then, they usually come and see us, L          |
| 692 |     | was there and supporting us.   |
| 693 | I   | Apart from supporting she also did a course with you on Modules 1,2 and 3.         |
| 694 |     | It's red and green . How did you find that?  |
| 695 | P15 | I found that very good because it was more about classroom arrangement.            |

|     |     |  |
|-----|-----|--|
| 696 | I   | Practical?   |
| 697 | P15 | Yes, practical. And then the groups, how to handle your groups. It was                 |
| 698 |     | more practical.  |
| 699 | I   | Okay, so all these trainings are building up. And then you had the NCS                 |
| 700 |     | training on the planning and the assessment, how did you find that?                    |
| 701 | P15 | That's where I got confused!   |
| 702 | I   | Because it was so theoretical?   |
| 703 | P15 | It was a little bit, because all these new things, learning outcomes, all these        |
| 704 |     | words and I became unsure of myself. I usually have confidence when                    |
| 705 |     | something is new but now that we are into it, at least I am.                           |
| 706 | I   | You are getting more familiar?   |
| 707 | P15 | Yes, I am getting a little bit but I need more guidance and assistance.                |
| 708 | I   | Okay, goed. Can I just ask you, in any of these courses, before I come to that,        |
| 709 |     | n your class, do you've got any learners that are struggling, that have got            |
| 710 |     | problems? You told me about the girl that is living with the granny, her mom           |
| 711 |     | died né? But apart from that, do you have other learners that struggle? What           |
| 712 |     | we used to call slow learners?   |
| 713 | P15 | Yes. Yes.  |
| 714 | I   | Is dit? How many of them?  |
| 715 | P15 | Since, yes, I've got but I cannot say, since there are different learning areas, I can |
| 716 |     | see this one is struggling in this, but the same one that is struggling is better in   |
| 717 |     | that, but there are learners.  |
| 718 | I   | So it varies?  |
| 719 | P15 | Yes.   |

|     |     |  |
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| 720 | I   | Do you find that learners, 'cause which was very nice for me was the                 |
| 721 |     | tracing that you do as well. I know, was it the 5 or the 3 she didn't know what to   |
| 722 |     | do, so you said she must trace it first né? But do you find that they turn it        |
| 723 |     | around? For instance, when they do a 3 like this or when they make a 6 they          |
| 724 |     | make it like that? Or a 7, they make it like this? Do you find ...?                  |
| 725 | P15 | I find that they do that.  |
| 726 | I   | Okay, have you been trained how to handle these things?                              |
| 727 | P15 | Mmmm-mmmm.   |
| 728 | I   | No? Okay goed. With barriers to learning, have you ever been trained on that?        |
| 729 | P15 | Yes, we do get that training but I for myself, I am not confident.                   |
| 730 | I   | Do you need more hands-on ...?   |
| 731 | P15 | I need, I feel I need more hands-on.   |
| 732 | I   | Do you feel it was just theoretically?   |
| 733 | P15 | Yes, because sometimes I will say, no, just tell your mother to help you and you     |
| 734 |     | don't know how to do it yourself.  |
| 735 | I   | Okay.  |
| 736 | P15 | So I need more.  |
| 737 | I   | So you need more. Okay, goed. Let us quickly look what we said here. So on           |
| 738 |     | the whole you found your training very positive, if I can summarise. It is only      |
| 739 |     | the NCS training that's a bit complicated for you. Because it's too abstract.        |
| 740 | P15 | Yes.   |
| 741 | I   | It is not practical enough. Okay, goed, let's say, <i>I need more training about</i> |
| 742 |     | <i>numeracy</i> , do you agree with that?  |
| 743 | P15 | Yes.   |

|     |     |  |
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| 744 | I   | <i>I wish more workshops to be conducted in numeracy. I need more training</i>           |
| 745 |     | <i>about numeracy. Because I will start learning numeracy, that's why I need</i>         |
| 746 |     | <i>training. I feel that I am doing a great job, that's what you have also said to</i>   |
| 747 |     | <i>me which is good, one must have self-confidence [laughter], I enjoy</i>               |
| 748 |     | <i>it because implementation is through playing games, I feel very nice and learnt</i>   |
| 749 |     | <i>more about numeracy, happy because at least I gained some knowledge in so far</i>     |
| 750 |     | <i>As numeracy is concerned. I feel good because I learnt now how to implement</i>       |
| 751 |     | <i>numeracy at a Grade R level. I am feeling okay, when I got the training. The</i>      |
| 752 |     | <i>first time I was shy but after that I felt free. Do you feel the same?</i>            |
| 753 | P15 | Yes.   |
| 754 | I   | Yes, let us look at the descriptive paragraph. <i>When teachers were exposed for the</i> |
| 755 |     | <i>first time to numeracy workshops, some teachers felt shy. However, they gained</i>    |
| 756 |     | <i>a lot of knowledge and skills which made them happy and to be self-confident in</i>   |
| 757 |     | <i>implementing numeracy in their classrooms. There are still numeracy</i>               |
| 758 |     | <i>gaps being experienced by teachers and therefore they need to be exposed to</i>       |
| 759 |     | <i>more hands-on numeracy workshops. You are happy with that?</i>                        |
| 760 | P15 | Yes.   |
| 761 | I   | P thank you so much for sharing everything, for your time, your passion, your            |
| 762 |     | beliefs, your perceptions, your knowledge with me. I am a very much                      |
| 763 |     | [unclear] person because I see the passion in you. And thank you for being so            |
| 764 |     | brave today, by having me in your class.   |

## ANNEXURE S

**SILENT THEMES IDENTIFIED FROM EXTRACTS FROM A TRANSCRIPTION OF AN  
INDIVIDUAL INTERVIEW [PARTICIPANT 1] COMPARED WITH A TRANSCRIPTION OF AN  
AUDIO VIDEO TAPE OF CLASSROOM ACTIVITIES OF PARTICIPANT 1**

| <b>Silent Themes</b>  | <b>Motivation for a “Silent Theme” being identified [inconsistencies and paradoxes, which occurred between the teachers’ beliefs, feelings, knowledge and experiences and their classroom activities].</b>  | <b>Extracts from transcription of individual interview regarding the teacher’s beliefs, feelings, knowledge and perceptions</b>   | <b>Transcription of audio video tape of classroom activities</b>  |
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| <p>Teacher-Centred</p> <p>Lack of going beyond the minimum requirements of the assessment standards</p> | <p>In most activities of the daily programme the teacher was the driving force, the planner, initiator and conductor of all interactions and, especially numeracy learning opportunities between herself and the learners. During Indoor Creative Activities, the teacher planned, presented and orchestrated the learners in participating in the numeracy activities such as modeling the symbol 3 with dough, counting 3 objects out from given 5 counters as well as completing worksheets with numbers on it. She also let the learners paint their pictures one by one, whilst she was standing next to the table, observing the learners using one paint brush and one</p> <p>In all above-mentioned activities, the learners’ involvement was restricted to obeying instructions by the teacher. When a learner started to display his own initiative by not following the domino card rules, but rather built a card house, the teacher immediately called him to order and instructed him to build the dominoes. The art display on the wall also depicted the same picture [carrot, cauliflower, beans, pumpkin] for every learner – there was no individual creativity or even use of paint. This is in contrast to the teacher’s belief that learners must be involved and able to “choose what they want to do” as well as “what I know is that in my class, I’ll always have a friendly atmosphere and free. They are not restricted in any way. Sometimes they choose what to do”. “Sometimes yes. Not always. I have to follow my daily preparation”</p> | <p>When I started this class, this Grade R class, it wasn’t more about learner involvement. I was involved and the learners were, it wasteacher-centred yes. But as years went passed, it turned now to be learner-centred. And the teacher is just there to guide the learners. What I know is that in my class, I’ll always have A friendly atmosphere. And free. They are not restricted in any way. Sometimes they choose what to do, Sometimes, yes, Not always. I have to follow my daily preparation.</p> <p>And in fact I must say, I want to say, my principal and my HOD, don’t really understand what’s been done in Grade R. Ja, so, when they come in the class, they want to see that, when they look at my daily preparation, they would like to know what’s gonna, why are you doing numeracy instead of</p> <p>It is learner-centred because the counting they do themselves, and using the same concrete objects,</p> | <p><b>Numeracy activities</b><br/> <i>The teacher let learners count whilst she picked up the tomatoes one by one, from 1 to 2.</i><br/> <i>The teacher asked the learners how many tomatoes there were and they answered two.</i><br/> <i>She requested the learners to count all the tomatoes from 1 to 10.</i><br/> <i>After the learners told the teacher that there were ten tomatoes she informed them that they were going to learn about the number symbol 3.</i><br/> <i>The teacher placed 3 tomatoes in front of the learners. She requested the learners to count 3 counters from the heap in front of them. She assisted the learners by counting one by one tomato to get three whilst the learners copied her with the counting out of three counters.</i><br/> <i>Some learners counted out 4 counters. The teacher intervened and instructed them to count out only 3 counters.</i><br/> <i>The teacher instructed the learners to take 3 counters and count them one by one, which they did.</i><br/> <i>The teacher assisted a child who has not participated yet.</i><br/> <br/> <i>The teacher looked whilst each child individually counted out 3 counters.</i></p> |

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| <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of going beyond the minimum requirements of the assessment standards</p> | <p>The number 3 symbol is placed incorrectly in front of the learner; it is on its side and may lead to remedial problems. One learner's worksheet was upside down whilst he was tracing the dots of the number symbols 1,2,3. A learner who made the 3 upside down so that it looked like a m, was told by the teacher to turn the dough board around so that it looked like a 3. The teacher instructed the learner to look at the number symbol on the piece of paper and to make his dough 3 to look like the one of the paper. The learner then turned the m around so that it looked like a 3. Another learner was also making his 3 to look like a m, but the teacher told him as well to turn his m around so that it looked like a 3. Another learner followed the above examples of his friends and also made the 3 to look like a m. When the learner positioned his 3 in the wrong position [the 3 was facing right instead of left], the teacher instructed the learner to turn the dough 3 around.</p> <p>In all above actions, the teacher did not show the learners practically how to start from the top and form the 3. Instead, she told them to turn the m around so that it looked like a 3.</p> <p>A young girl was struggling to form the 3 from the dough. The teacher instructed her to mould the dough</p> | <p>I have here some learners with barriers, those who couldn't count and like others, leaving out some numbers. I think I have to concentrate more on them. I didn't concentrate I think I, we did repeat some numbers, and I let them take their own time, when they were trying to mould the figure 3. Do you feel that you've got enough understanding about barriers as a teacher? Yes. I, we've had a talk about barriers and learners with, LSEN learners Yes, we had, we've talked in one of our Workshops we had.</p> | <p><i>The teacher asked them how many counters do they have and they answered 3.. The teacher then instructed the learners to count to 3 with their fingers. Some learners counted up to 4 with their fingers whereby the teacher interrupted the learner and asked him again to count to three showing him which 3 fingers should be used The teacher then asked individual learners to count up to 3 with their fingers. The teacher informed the learners that she was going to give them each a little piece of paper on which 3 was written. She then told them they were going to write the number 3 symbol on top of the 3 on the little piece of paper.</i></p> <p><i>Some learners were unsure how to complete the worksheet where they had to follow the dots to make number symbols 1, 2 and 3.</i></p> <p><i>The teacher instructed the learners to follow the dots of the number 3 and trace 4 to form a 3. The teacher told the learners to start at the first dot on the top.</i></p> <p><i>The teacher put away the counters and handed out to the learners dough boards and dough</i></p> <p><i>The learners spontaneously decided to stand and work behind their chairs rolling out the dough. The teacher instructed the learners to follow her example in how to manipulate the dough to form a number 3 symbol.</i></p> <p><i>The teacher instructed a learner to complete the worksheet</i></p> <p><i>The learners started to play spontaneously with the dough</i></p> <p><i>The teacher handed out to the learners a sheet of</i></p> |
| <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> <p>Lack of developmentally appropriate practices</p>   |  |   |   |
| <p>Lack of Numeracy concepts and</p>  |  |   |   |

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| skills and how to implement it in a hands-on approach                               | again. When the learner still struggled, the teacher intervened, rolled the dough into a long sausage form. She then instructed the girl to cut it with her hand into two pieces and to shape the one piece into a round form with the top still on the left side. The learner got confused and made 2 instead of 3. The teacher then asked the other learners what the shape was what the girl made. They gave different answers i.e. 9, 8, 7 and 1. The teacher told them it was a 2. The girl was requested to roll the dough again and make a 3. This activity illustrated that the learners did not have a number concept or understanding of what the numbers were.   |  | <i>advertisement with prices on it. She instructed them to look at the advertisement paper and circle with the pencils all the 3's on it.</i>  |
| Lack of developmentally appropriate practices                                       |   |  | <i>The teacher counted with the next group the counters from 1 to 3. When a learner struggled the teacher assisted him in counting one by one the counters out to 3.</i>   |
| Lack of Numeracy concepts and skills and how to implement it in a hands-on approach |   |  | <i>When some learners wanted to count on to 4 and 5, they were stopped and instructed to go only to 3. One learner experienced problems in counting out to 3 and kept on counting further. The teacher assisted him until he was able to count out only 3 counters.</i>  |
| Lack of going beyond the minimum requirements of the assessment standards           | Only the first row was traced correctly. The other rows were just lines being drawn harshly and without controlling the crayon carefully and neatly.  |  | <i>The learners with the advertisement activity got bored with the activity and experimented what they could do with their pencils. In the meantime, the teacher was instructing the learners to trace the number 3 symbol on the little pieces of paper in front of them, starting with the dot on the top.</i>   |
| Lack of developmentally appropriate practices                                       | The teacher did not use the learner's own curiosity by asking them open-ended questions, or drawing them in an interactive dialogue about numeracy concepts. She did not lead the learners to go beyond the obvious and to experiment, explore and discover numeracy concepts, as the situation with the building of the card house illustrated. The teacher did not verbalise learners' predictions and discoveries. There was no consolidation of numeracy concepts as these concepts were being dealt with haphazardly [the number concept 3, opposites]. When learners experienced problems with the worksheets, the teacher contributed it to the fact that they 'didn't listen] and did not investigate the possibility that the task was not developmentally appropriate for the learners and that she was skipping stages by jumping from the kinesthetic directly to abstract. Although the teacher said and agreed that learners must learn through play, she used worksheets to make sure that learners were school-ready. She was thus coaching them, instead of preparing them through lots of physical and kinetic experiences before engaging in 2-dimensional worksheets and abstract reasoning. She did not understand that a learner needed to be prepared for this kind of engagement. By doing it too soon, learning barriers could be experienced by the learners. |  | <i>The teacher intervened at the advertisement activity and called the learners to focus on the activity of identifying 3's.</i>   |
| Lack of Numeracy concepts and skills and how to implement it in a hands-on approach |   |  | <i>The teacher handed out to the learners worksheets depicting pictures of various vegetables. The teacher then asked the learners to tell her the name of the vegetable she was pointing to at the worksheet. The learners started amongst themselves identifying some of the pictures e.g. carrots. However the teacher told them that the picture was not about carrots. The teacher then went to the theme table and pointed to the beans vegetable picture and asked the learners again what it was. The learners answered that it was green beans. The teacher then pointed to another picture on the worksheet, where</i> |
| Lack of going beyond the minimum requirements of the assessment standards           |   |  |  |
| Lack of developmentally appropriate practices                                       |   |  |  |
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| <p>ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of developmentally appropriate practices</p>  |  |  | <p><i>another picture on the worksheet where upon some learners said it was a tomato whilst the others said it was a beetroot. The teacher confirmed that it was a beetroot.</i></p> <p><i>The learners coloured in their vegetable worksheets.</i></p> <p><i>The learners traced the shape of the pumpkin and painted the pumpkin with orange paint.</i></p>  |
| <p>Teacher-Centred</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, Reasoning and problem-solving skills</p> <p>Lack of developmentally appropriate practices</p> | <p>The teacher initiated, controlled and gave the pace of outdoor play activities and games. There was no discussion to lead the learner to problem solving, thinking skills and creativity i.e. no discussion was held on why a hoop is rolling, what will happen if it was formed like a square, what can one do with a hoop etc. No numeracy concepts were specifically enhanced or discussed. No preparation was done for spatial concept formation and consolidation such as in front, behind, around, through, on top etc. No verbalisation such as first, second last took place during the games.</p> <p>Although the learners enjoyed the activities, no verbalisation took place such as: I am going to throw a high ball to you, or let the ball bounce once before you catch it, through a bit harder etc. No verbalisation or discussion took place of concepts such as inside, outside, around etc.</p> <p>The teacher worked very hard and was active in all outdoor movement activities, with very limited input by learners in initiating their own movement play activities. Although a variety of activities/games were conducted, it felt that it was done for the sake of doing movement activities without the necessary verbalisation, questioning, experimenting and exploration and problem-solving which could have enriched the numeracy concepts of learners at these activities. The teacher controlled all the outside play activities. The teacher did not use the opportunity to re-inforce through play space and position concepts – she took it for granted that the learners knew and understood it.</p> | <p>Do you feel you can do all that assessment standards?<br/>No, I cannot, I am not. I'm not threatened by the assessment standards because when you teach, you expect to get something out of it, after what you have done. So, I think assessment standards is your achievement after</p> <p>Do you feel you want to have more exposure to numeracy training? Are you comfortable with what you've got? Do you feel that you have had enough training?<br/>Yes, I am comfortable with</p> <p>Do you feel, by the end of the year, you will have covered all the concepts according to the numeracy standards? Are there too many? Are there too few for you?<br/>No. they are just enough.</p> <p>Tell me, what do you feel about concepts?<br/>No they are just okay, because concepts are always in their daily lifes. Like, position and space, front, back, side, yabone?</p> <p>Under, on top of, propositions, so it is always in their daily lifes.</p> | <p><b>Outdoor free play and movement activities</b></p> <p>The outdoor play area was fenced off, it was a small place with broken equipment [swings, jungle gym]. The ground was not smooth.</p> <p><i>The teacher put out 4 hoops and 2 rings. The teacher showed the learners how to twist with the hoops.</i></p> <p><i>The teacher then initiated a racing game – she explained how the game was to be played and facilitated the playing of it, whereby the learners had to run 5 metres, crawl through a hoop, run around a child and run back to group for the next child to start.</i></p> <p><i>The teacher initiated a game with ropes whereby some learners were handling the ropes and others had to jump. The teacher assisted in organising the children to jump and twisted one end of the rope.</i></p> <p><i>The teacher initiated and played actively in a ball game whereby she threw the ball to learners - they caught it and threw it back to her.</i></p> <p><i>The teacher initiated and facilitated the "cat &amp; mouse" game.</i></p> |
| <p>Lack of Numeracy concepts and skills and how</p>   | <p>No educational toys or equipment or books were placed outside to enhance their numeracy skills.</p>   | <p>The participant did not share any beliefs, feelings, know-ledge and perceptions regarding</p>   | <p><b>Eating outside and Outside Free-play</b></p> <p><i>Learners took out their lunch boxes, sat outside on</i></p>   |

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| <p>to implement it in a hands-on approach</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p> <p>Lack of developmentally appropriate practices</p>   | <p>The teacher sat on a chair and watched the learners. However, the only conversation that took place between herself and the learners were when they asked permission to use the toilets.</p>  | <p>eating outside and outside free-play activities</p>  | <p><i>the steps and ate their snacks. Thereafter, they walked aimlessly around the cemented square.</i></p>   |
| <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p>   | <p>This activity took place under the supervision of the teacher without any spontaneous discussion, except for controlling and issuing of instructions</p>  | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding washing-up activities</p>   | <p><b>Washing-up</b><br/><i>After above activity, the learners lined up and wash their hands in a basin, using the same towel to dry</i></p>  |
| <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> <p>Teacher-Centred</p> <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>The learners sat on the carpet with the teacher behind her desk on a big chair. This in itself created a barrier between the teacher and the learners physically – she was not at their eye level as well as not in touching distance of her learners.</p> <p>The song was sung merely for the sake of singing and dramatizing it. No discussion to enhance numeracy concepts such as opposites took place.. No problem-solving and thinking skills were being exposed by questioning such as: "Show me what movement can you make that has big/large movements? Small/tiny movements? Low/High movements" etc. No creativity was enhanced i.e. every child used the same dramatizing actions of the song.</p> <p>The teacher did not demonstrate to the learners how to handle each instrument or asked them to play the instruments per group i.e. the drums and then the shakers etc. Therefore it became a bit chaotic. Reading skills and rhythm skills could have been enhanced if the teacher used different cards for the different instruments to be played during the singing of the song and it's verses and choruses.</p> <p>The music activities were done for</p> | <p>When we were doing movement ring, the physical movement ring, we did eh, we all did a rhyme "Nina nina diyakule". It means I've been small but now I am big. I have been fat and now I am thin. So, that's maths, though they don't know about it,</p> | <p><b>Music Activities</b><br/><i>Learners sang and dramatized actions – I am small but now I am big</i></p> <p><i>The teacher handed out music instruments and spontaneously, the learners started to experiment with it. The teacher intervened and called them to order as this was becoming chaotic and noisy. The learners sang the song and used the music instruments to accompany them.</i></p> |

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|   | <p>the sake of doing it – no real thought and planning was put in it to consider what must be achieved by this activity, what numeracy concepts must be enhance and consolidated with music activities and what creativity, thinking skills and problem-solving opportunities could have been enhanced Music activities are much more than just singing, dramatizing and playing with instruments</p>   |  |  |
| <p>Teacher-Centred</p> <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>This activity was not thoroughly planned as the teacher sifted through a puzzle box/holder for pieces. When learners wanted to experiment with the domino pieces, the teacher took control of the situation and instructed them to focus on playing domino, thus matching the cards</p> <p>All the activities were teacher driven, teacher-centred and controlled. It was not a successful venture, because as soon as the teacher moved away from one table to assist at the next table, the activities of the previous table fell flat. Not all the learners were involved, there was no discussion, no opportunity for free choice {only 3 games – dominoes, shape cards and sequence cards were handed out to the tables}, no problem-solving or thinking skills were enhanced, and when there was a blink of individual creativity, it was smothered. The learners were tired, after being active outside and participating in a music ring.</p> <p>Although there was a friendly atmosphere in the classroom, the learners were restricted and not free to choose their own activities or how to interact freely with activities. The teacher was being ruled by her daily programme – she did not understand that the daily programme was just the framework but inside the framework she could be flexible. She was also being guided by her HOD's &amp; principal's understanding of what must happen in a Gr R class.</p> <p>Planning was a frustration. Although the teacher knew that numeracy must be integrated with the daily programmes, she focussed on having numeracy "periods" – her creative activities and school readiness activities focussed only on numeracy activities with the exclusion of literacy and life skills activities. The teacher did not not understand that although numeracy concepts may superficially happen spontaneously, it</p> | <p>I've been battling with the RNCS planning<br/>I would say the paperwork, it's too much.<br/>And it needs a lot of time to do.<br/>Otherwise, planning my activities is no problems.<br/>The time of day when you do numeracy activities, you do it early in the day?<br/>Early in the morning.<br/>Early in the morning?<br/>Although you've got a school readiness one about quarter past twelve o'clock<br/>Mm<br/>Do you see numeracy as in the Foundation Phase as a period of it's own?<br/>No, it integrates with other subjects. Whatever you do, there is going to be numeracy.<br/>So it happens spontaneously?<br/>Mmm</p> <p>Okay, I want to come to this concepts, again and the planning of this concepts, is there something guiding you to say which concepts must be planned when?<br/>And what are those concepts?<br/>No, we don't have anything to guide us except that you, you choose for yourself<br/>You choose? Where do you choose from?<br/>From the workbooks that they give you</p> | <p><b>School-readiness activities</b><br/><i>The teacher sifted through a puzzle box/holder for pieces. She explained to a group of 6 learners to put cards into a sequence. The teacher placed the story pictures into a sequence, explaining to the learners what the story was about. She then told them that they must sequenced the story cards, just like she did.</i></p> <p><i>At another table, 10 learners were each given a few domino cards. Two Learners took control of the cards by just shuffling it in their hands whilst the other learners just watch them listlessly.</i></p> <p><i>One child built a card house with his cards, and some learners followed his example. The teacher instructed the learners to focus on playing domino, thus matching the cards. She then played the game herself by explaining the game to the learners, whilst they watched how she matched the domino cards. Once she left the table, the learners were back to not knowing what to do, how to do it and just looked bored. The teacher handed out another set of puzzles to the learners. The teacher guided the learner to look for the shape that was similar to the outline.</i></p> |

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|  | needed to be dealt with in an in-depth manner for real understanding and consolidation to take place. Although the teacher planned for numeracy activities in the creative activity ring, she was not prepared when she presented the school-readiness activities as well as the story activities. She merely put out activities for the sake of activities and read a story for the sake of having a story.  |  |  |
| <p>Teacher-Centred</p> <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>The teacher was not prepared – she looked at a “deurmekaar” book corner/shelf to find a story book and paged through a few books before she got a book she was happy with. She created a barrier between herself and the learners by sitting behind her table, on a big chair, whilst the learners were sitting on the carpet. She did not practice what the assessment standards preached – she held the book incorrectly [bent and not open], she did not discuss the title, beginning or who the author was. No problem-solving skills were enhanced by predicting what the story was by looking at the cover page of the book.</p> | <p>There are no classroom activities without planning.</p> | <p><b>Story time</b><br/> The teacher looked at a book corner/shelf to find a story book and paged through a few books before she got a book. <i>The teacher read the story whilst the learners sat on the carpet, listening. The teacher asked the learners closed questions regarding whether a pumpkin is a fruit or a veg? The learners answered by saying it was a veg. The teacher then asked the learners what colour was the pumpkin and they answered it was yellow. The teacher then asked the learners whether their mothers cooked the pumpkin? Some answered yes and one said he did not like pumpkins. The teacher then said to the learner that although he did not like eating pumpkins, he ate it. She explained to the learners that when they didn't like something, it did not mean that they haven't eaten it. The teacher asked another learner whether she ate pumpkins? The learner answered yes, she did and she loved eating pumpkins. The teacher told the story of a man called Joe, The teacher then informed the learners that when their mothers peel onions, potatoes, cabbages, the peels must be thrown into a hole in the garden to make the soil fertilizer. One learner responded that they did make the garden to be fertilized by throwing only the peels on the ground and not in a hole. The teacher proceeded with the story by saying Joe had a beautiful garden.</i></p> |

## ANNEXURE T

**SILENT THEMES IDENTIFIED FROM EXTRACTS FROM A TRANSCRIPTION OF AN INDIVIDUAL INTERVIEW [PARTICIPANT 2] COMPARED WITH A TRANSCRIPTION OF AN AUDIO VIDEO TAPE OF CLASSROOM ACTIVITIES OF PARTICIPANT 2**

| Silent Themes  | Motivation for a “Silent Theme” being identified [inconsistencies and paradoxes, which occurred between the teachers’ beliefs, feelings, knowledge and experiences in their classroom activities].                                | Extracts from transcription of individual interview regarding the teacher’s beliefs, feelings, knowledge and perceptions   | <i>Transcription of audio video tape of classroom activities</i>   |
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| <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners’ creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of going beyond the minimum requirements of the assessment standards</p> <p>Lack of developmentally appropriate practices</p> | <p>No discussion about the story took place.</p> <p>No questions were asked and no problem-solving situations were given to the learners based on the story.</p>  | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding the Bible story activities</p> | <p><b><i>Bible Story</i></b><br/> <i>Bible story – Jonas – The teacher read the story to the learners whilst they were sitting and listening to the story.</i></p> |
| <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners’ creativity, thinking, reasoning and problem-solving skills</p>  | <p>Rote learning took place with no integration with numeracy. There were no discussion, questioning, or any problem-solving situations where learners had to make use of their thinking skills. No integration with numeracy</p> | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding the news ring</p>              | <p><b><i>News ring</i></b><br/> <i>Each learner was requested to share their news. The learners recited sentences one by one.</i></p>                              |

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| <p>Lack of developmentally appropriate practices</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p>  |   |  |   |
| <p>Lack of developmentally appropriate practices</p> <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of going beyond the minimum requirements of the assessment standards</p> | <p>There was no individual questioning to make sure that the learner understood the concepts and was not merely reciting a rhyme i.e. "what is the day before Tuesday called? What is the day after Tuesday called? What is the month before June? What is the month after June? What are the months for Winter?"</p>   | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding the weather and time concept discussions.</p>  | <p><b>Weather chart &amp; Discussion of time concept</b><br/> <i>Learners recited days of the week and names of the month like a rhyme. The teacher used a learner to identify the weather of the day and then checked with the rest of the class whether the learner identified the weather correctly.</i></p> |
| <p>Lack of developmentally appropriate practices</p>   | <p>There was no individualization to ensure that individual learners understood the number concept and no questions were asked i.e. "What comes before or after 5?" to ensure that the learner understood the number concept of 5.</p> <p>Although the teacher asked closed questions i.e. "How many fingers on your hand?", no questions were asked to stimulate thinking and problem-solving skills</p> | <p>...Counting with the fingers. 1 and 5 makes it 6. That was with the fingers. I think it has made them to be ready to know that, so that when you say let's do it physical by using bottle tops or sticks, if they know by using their finger then they use the bottle tops, that's where they gonna know exactly what you are going to say: one and four this side, how many? 5. So I feel it is the only way to involve. They thought I was playing and they did it for fun. But I feel it is making them, 'cause even if they don't understand, it is there in their heads.</p> | <p><b>Mental Maths</b><br/> <i>Addition on <math>1 + 1 = 2</math><br/> <math>9 + 1 = 10</math></i><br/> <i>Learners recited above like a rhyme, using their fingers.</i></p>  |
| <p>Lack of</p>   | <p>The teacher did not make sure</p>  | <p>I think it has made them to</p>   | <p><b>Counting</b></p>  |

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| <p>developmentally appropriate practices</p> <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p>  | <p>whether the learners understood the number concept, for example of 7 or 9?</p>  | <p>be ready to know that, so that when you say let's do it physical by using bottles tops or sticks, if they know by using their finger then they use the bottle tops, that's where they gonna know exactly what you are going to say: one and four this side, how many? 5. So I feel it is the only way to involve. They thought I was playing and they did it for fun. But I feel it is making them, 'cause even if they don't understand, it is there in their heads.</p> | <p><i>The whole group counted together whilst the teacher pointed to a number on the 100 chart.</i></p> <p><i>Learners said it like a rhyme.</i></p>   |
| <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of going beyond the minimum requirements of the assessment standards</p> | <p>The teacher did not make sure that her own actions were correct i.e. she instructed the learners to put up their right hands and then she demonstrated it to them by putting up her right hand – the learners then put up their left hands. This is a gross remedial problem. The teacher should show her left arm for the learners to copy with their right arms if she faces them.</p> <p>There was no individual attention to ensure that individual learners understood the perception and direction concepts. The questions asked and the way the group answered them, it sounded more like a rhyme. The teacher also did not take individual actions in account i.e. one learner became bored and did not do the actions. She did not pick this up.</p> <p>Although the teacher asked questions referring to what the body parts can do, the group answered in a rote learning fashion. There was no emphasis on creative thinking or problem-solving skills i.e. "How would you move a ball if you do not have any arms or legs?".</p> | <p>And I feel that I have to control them.</p> <p>Yes, so that they know they are here to learn</p>  | <p><b>Perceptual activities</b></p> <p><i>The teacher instructed the whole group to stand up/sit down/stand up/turn around/run at one place</i></p> <p><i>The learners touched their body parts and verbalised it on the teacher's instructions.</i></p> <p><i>When learners were instructed to touch their shoes, they spontaneously in a whole group recited, without questioning, that the colour of their shoes are black – this illustrates the depth of the rote learning of phrases</i></p> |
| <p>Teacher-Centred</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of open-</p>  | <p>There was no discussion of any opposites nor any practical demonstrations of opposites, i.e. showing with your figure a tall man and a short man.</p>   | <p>And I feel that I have to control them.</p> <p>Yes, so that they know they are here to learn</p> <p>...</p>   | <p><b>Perceptual activities</b></p> <p><i>Focused on opposites The learners were requested to name opposites which they recited one by one like a rhyme</i></p>  |

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| <p>ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p>  |  |  |   |
| <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> <p>Lack of going beyond the minimum requirements of the assessment standards</p> | <p>Learners silently traced around shapes. There was no discussion of shapes, no comparison of shapes, no questioning of why a shape has a specific shape, no thinking and/or problem-solving skills being encouraged by asking which shapes be used to make a diamond shape [2 triangles] or what was the difference between a circle and a square. No spontaneous creativity was being encouraged by encouraging learners to place the patterns in a pattern of their own choice and then trace it around.</p> <p>Cutting of worksheet pictures [tall and short] – was also done in silence, with no discussion taking place.</p> <p>Drawing of balls and numbering – this activity was also done in silence, with the teacher giving assistance from time to time. However, due to not carefully preparing the environment and the learners for this activity, remedial problems did occur. Firstly, the big blank sheet of papers had no horizontal lines with the result that most of the learners were not able to draw and write horizontally. The circles and numbers were sometimes squashed in the left corner of the page. Furthermore, the poster with the circles and numbers were not placed nearby for the learners to follow – it was more than 5 metres away from them at the front of the class – in between were other tables with activities as well. Instead of expecting learners to write the number symbol, the papers should have been prepared with dotted circles and numbers for the learners to trace – this would have assisted learners to practice making the symbols correctly and not having any mirror symbols i.e. the 3,5,7,9 and 8 being placed horizontally instead of vertical</p> | <p>If you got a problem or do you experience in your class problems with more, that's more like a, that needs a remedial intervention for instance when they make a eight, they make it sideways, instead of it being from top to bottom and from left to right or when they make a 9 they make it like something like b's</p> <p>ja, have you experienced that?</p> <p>Yes, there are three doing that.</p> <p>How do you handle that?</p> <p>Have you been trained on how to handle such situations?</p> <p>There is no way to help them but, because at school we used to send them to another psychology, Fort England, that is the only [unclear] that is helping. But at the moment I am trying. Because some of them, they are turning the paper, they like to do that. Because you can see, you gonna watch them, turning the paper. I'm giving them more time. If you did a [unclear] then I'm gonna say Ok, write the number next to it and can you please do it again. But the next day I will see them doing it back again, then I will try it</p> <p>So a lot of exercises. Just tell me, did you have a lot of training on how to remedy this kind of thing?</p> <p>Not a lot.</p> <p>Would you say that this is a need for you, that you would like to address remedial problems with young learners?</p> | <p><b>Creative activities</b></p> <p><i>The teacher demonstrated how to trace around shapes and gave instructions in their mother tongue. At table 3, drawing and colouring activities were set out i.e. colour in the work-sheet and paste it on a cardboard. At table 4 the worksheet was cut and at table 2 the learners drew balls and wrote the number</i></p> |

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|  | Some learners were bored with this activity and their attention wandered  | Yes.<br>There are hyperactive learners that always need your attention and supervision. What I do then is making sure that I'm keeping them busy. That is the only way to control them. If he is finished doing this, you should give him another thing to do. The only thing you mke them to learn is to keep them busy all the time. And to give them love and support. And assess them. To think about the planning, what am I going to do with them?  |   |
| Lack of developmentally appropriate practices<br><br>Lack of organizing and managing the Grade R classroom to enhance numeracy skills<br><br>Lack of implementing planning in the classroom<br><br>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills | The following problems were experienced: <ul style="list-style-type: none"> <li>the free play time was very short, as it was only allowed whilst the other learners were finishing above activities – plus minus 8 minutes.</li> <li>the dough play area was limited to 6 learners and more than 10 learners crowded around this table.</li> <li>The fantasy corner was also cramped with too many learners in such a small place.</li> <li>No block play was put out or encouraged.</li> </ul> Golden opportunities to develop numeracy concepts, problem-solving, thinking and creative skills were not explored. This was the only learner-centred activity that took place. | Learners learn best when they use their senses.<br>Can you give me an example of today's activities, where you had them, giving them a chance to be free there?<br>Yes, when I sent them to the playdough table, I asked them, do you want to go to the playdough table or do you want to get another paper to draw what ever you want. Then they said to me, they want to go to the playdough first. Then I said others: go to the doll corner. Or the doll corner? So, you gave them a choice?<br>Yes, those who go to the doll corner, they feel free, because I asked, can I give you another paper or do you want to go to the playdough?<br>So you have given them an opportunity to choose?<br>And even, those that were drawing balls, was a little bit [unclear] because I didn't focus on them. As I said to them, you can draw yourself or the balls, and then they decided to start with the balls and then turn the paper and draw themselves. | <b>Free-play activities</b><br><i>Only when above activities were finished, learners were allowed to choose whether they want to draw at the back of the big papers a picture, or whether they want to play with dough or play in the fantasy area.</i> |
| Teacher-Centred<br><br>Lack of open-ended questions which made an appeal to learners' creativity, thinkin, reasoning and problem-solving skills  | No discussion and/or interactions between teacher and learners took place whilst they were eating.  | The participant did not share any beliefs, feelings, knowledge and perceptions regarding  | <b>Snack-time</b><br><i>The learners brought their own snacks, and after singing a prayer, they proceeded to eat at their tables, whilst the teacher was sitting at her table eating her own snack.</i>   |

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| <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p>   | <p>There was supervision by the teacher but no discussions or interaction between the learners and the teacher.</p>  | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding outdoor free-play activities</p>  | <p><b>Outdoor free-play activities</b><br/> <i>The Gr R learners were playing in front with organized activities such as balancing bean bags on their heads whilst walking on tyres or skipping with ropes. Spontaneous counting started as a learner skipped.</i></p>   |
| <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p>  | <p>Although the learners enjoyed above activities, it was not learner-centred; all the activities were planned, initiated and controlled by the teacher. There was no discussion, questioning, creativity or problem-solving activities. Overall, the teacher put the learners at a steady pace through movement activities but there was no real numeracy concept verbalization such as verbalizing by the teacher that she was throwing the ball high/low and asking the learner how would he/she move over the tyres if they did not have feet etc.</p> | <p>Most of the time, I plan the activities because they don't know from A to B. So I have to plan for it, so I can see their weaknesses and strengths</p> <p>So you feel that learner involvement, if learner involvement is important, one needs to respect their right to choose sometimes not to be involved.</p> <p>Yes</p> <p>And that you rather would be learner-paced</p> <p>Yes</p> <p>If we say, we need to prepare learners for learner involvement, how would you go about that?</p> <p>What I am doing, by the end of the week, I want to be sure that each and every learner did participate in that activity. Today I will take 8 learners to do that activity on numeracy and tomorrow another group, then by the end of the week I will have 38 pages. Then it is there where I am going to assess. So I am involving them in a correct way.</p> | <p><b>Movement Activities</b><br/> <i>The teacher initiated the movement activities by requesting learners to stand in a circle and move forward whilst she threw a ball to them and they had to catch it. Learners were chanting a song whilst this activity was done.</i><br/> <i>The activity was repeated but this time with beanbags being thrown to the learners.</i><br/> <i>The teacher initiated a running game whereby she called the rhythm and the learners had to jog on the rhythm, escalating from slow to fast. When she stopped clapping the learners had to freeze and count, beginning with one and showing one finger in the air. The game was repeated until they have stopped ten times and ten fingers were in the air.</i><br/> <i>The teacher requested the learners to stand in a circle and play a chasing game "vrot-eier"</i></p> |
| <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of developmentally appropriate practices</p> | <p>Learners were put through the paces of singing and dramatizing, but no discussion, or even inviting learners to do the opposite of the counting song, thus increasing instead of decreasing [as the theme was opposites]. There was no discussion or questioning or even inviting learners to initiate which song they would like to sing – very teacher centred.</p> <p>Although the learners enjoyed the music activities, no new skills were learnt or practiced. The teacher merely watched as individual learners acted out the story.</p>         | <p>I believe that the children must be free in the classroom, and they must do what they want to do. But as long as I am sure they are learning, even if they are there in the doll corner, I know they are learning some skills. Some are speaking English and they are teaching each other, some will learn colours, to count. Yes, yes, in a classroom there must not be such noise, there must just be normal noise,</p> <p>It must not be chaotic?</p> <p>This is what I feel, because some children are learning when it is a little bit quieter although some are learning when they are talking to each other. Another one is</p>   | <p><b>Music Activities</b><br/> <i>The learners were singing and dramatizing familiar songs, which included a counting song [5 little monkeys on the bed].</i></p> <p><i>The music activities included a dramatization of a story.</i><br/> <i>The teacher initiated the music activities</i></p>  |

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|  |  | <p>teaching, just give me an orange crayon, another one is going to learn this is orange, it is not red. So there must be communication with them, with each other? Yes, there must be. But it must not be so rowdy that it becomes chaotic? And I feel that I have to control them. You have to control them as well? Yes, so that they know they are here to learn. So the atmosphere you are trying to say to me, is that they must feel free what they can do but do not get out of hand. Yes. So you make sure that you've got to find a balance between free or let me say, frisk and control? Yes and I also feel about the classroom, they must learn to respect everything, even their papers. Even to respect others, and everyone that is getting in and up, So you feel respect for everything that's going into the classroom, also is helping the classroom to be conducive for learning? Yes, yes, because if they are throwing toys, that's when they are out of control and then you become angry? Yes. You become angry and the class atmosphere becomes Yes, and even me, I must always be in the level of them, so that everyone can come and express themselves, tell me what is their need</p> |   |
| <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy con-</p> | <p>There was no discussion of the picture or even inviting a learner to be creative by asking him/her for example, "Where do they think the bus is going? Does the bus look the same as the taxi that they used to school? How many wheels are there on the bus?". Again, learners were put through the paces, rote learning was occurring but no real understanding and depth was being developed. No breaking up of the sounds – b – u – s occurred and then put together to make a word – thus no questions like: "What comes after the</p> | <p>There are hyperactive learners that always need you attention and supervision. What I do then is making sure that I'm keeping them busy. That is the only way to control them. If he is finished doing this, you should give him another thing to do. The only thing you make them to learn is to keep them busy all the time. And to give them love and support and assess them. To think about</p>  | <p><b>Reading of alphabet cards</b><br/> <i>The teacher sat in front of the learners, showing them alpha-bet cards one by one and requested the learners to name the picture and sound the alphabet sound i.e. b for bus. The learners knew the cards and sounds.</i></p> |

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| <p>cepts and skills and how to implement it in a hands-on approach</p> <p>Lack of going beyond the minimum requirements of the assessment standards</p> <p>Lack of developmentally appropriate practices</p> | <p>b or what is the last letter?").</p> | <p>the planning, what am I going to do with them?</p> <p>What other barriers do you've got? You named hyperactive in the class.</p> <p>There is a slow learner. There is another learner that is a little bit nervous. I don't know what to do, I don't know how to cope with him. I never had a nervous learner.</p> <p>He looked like an abused, to me, but I can't go to his family and say what is the problem? He is never, even if he is doing his work, he is never confidential, He is just doing it. If I am gonna ask him, why are you drawing this, he [teacher demonstrates as if she is being shocked movement] shock and to be nervous, he does not answer you the right way.</p> <p>I have this year only this nervous learner and the slow learner, they are about two. I make sure that when I do my planning I cater for them. And assess. And give them love and support. What I'm doing, if I gonna demonstrate what to do on that tables, I make sure after they all seated down, I go to them individually and then say to them: "Do you know that you have to do this?"</p> <p>And then I look at her eyes, if she says yes, and I can see the eyes, she is understanding, and then I go to another one. This is the only way I am teaching them. To go to them quietly and say nicely "Do you know you must do this?".</p> <p>You have just mentioned this nervous learner that you don't know what to do. With the slow learners and the hyperactive learners, do you feel you have enough experience and enough skills and enough training to handle these kids or would you like to have more training on it?</p> <p>I would like to have more training. But at the moment, I am coping with them. Maybe there are some changes about this slow learners, that's why I would</p> |  |
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|  |   | <p>like to get some more training. And because really, I don't know how to cope with the situation with the one that is not confidential. Because sometimes I feel coming to her to say something, but because she's gonna [teacher makes jerking movements] I decide I must leave her.</p> <p>Language barriers, do you also experience language barriers? Your learners are mostly isiXhosa speakers? Home language?</p> <p>Yes, a big challenge. When they come they just speak Xhosa and even if you are speaking English, because you are Black, they take that advantage not to answer you, they think why are you speaking English everyday, because you are Black.</p> <p>They know you can speak Xhosa?</p> <p>Yes.</p> <p>But I feel to just force them because they know the words.</p>   |  |
| <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of going beyond the minimum requirements of the assessment standards</p> <p>Lack of developmentally appropriate practices</p> | <p>Table 1 - Some learners put the shapes behind and not on top of each other. Only 2 pictures and sometimes 3 were built like this. There was no finishing off the row [5 pictures]. The teacher did not discuss this activity with the learners. They merely dwindled with it.</p> <p>Table 2 - Although learners had to use thinking skills by identifying the shape and put it then in a specific order, no problem-solving skills were challenged i.e. one learner kept on starting all over again - first she put the thread on the card line. Then she identified a red shape and placed it on the left of the string, as the pattern card is stipulating. Then she identified the second colour shape, take away the red shape and place the second colour and then the red shape again. She then identified the 3<sup>rd</sup> colour shape, took away the first two shapes. Place then the 3<sup>rd</sup> colour, then the 2<sup>nd</sup> colour and then the 1<sup>st</sup> colour. By this time she got bored and overwhelmed and did not finish the pattern. Instead, the teacher should have pointed out to her that there is a problem and how does she think they can solve it - by merely putting a knot on the end of the string and then</p> | <p>... the learners learn a lot because they learn to play. They don't know that they are learning but they are learning. They like to be involved in all activities.</p> <p>How do you handle a situation where you find that a learner is not really involved; he is just looking instead of let's give an example, today you had an activity under your school readiness, where they had to thread.</p> <p>Yes, it is difficult to force him. But I just thought maybe he was not interested today. because if I was going to force him he was not going to be happy. But tomorrow I am going to do the same and then I will see, try that he ... . Because I will end up forcing him, because at the end I would like to assess him to see if he knows the colours.</p> <p>How would you involve learners with problem solving and thinking?</p> <p>For numeracy?</p> <p>Ja, especially for numeracy</p> | <p><b>School-readiness</b></p> <p><i>The teacher set out 3 tables: At table 1 provision was made for copying patterns with Geo-shapes. Some learners used one colour shapes and just put one shape on the pattern strip. If the pattern strip was turned over, a learner was requested to put at least 3 shapes on top of one another to make a specific pattern.</i></p> <p><i>At table 2 learners were busy threading shapes according to a pattern card.</i></p> <p><i>At table 4 learners were building puzzles.</i></p> |

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|   | <p>start threading without the shapes falling off.</p> <p>Although the teacher gave from time to time assistance, she did not intervene when a learner battled with a pattern and the girl opposite him, just leaned over the table and started to build it for him. Thus the learner did not achieve anything and merely became a spectator watching someone else finishing off his own puzzle.</p> <p>Overall, there was no discussion, exploration or any experimentation during these activities. The teacher supervised the activities but did not ensure that learners finish off their patterns or what individual learner's real understanding of the activity was.</p> | <p>but for any situation. In your class, do you feel there was a situation today that had the opportunity for problem-solving or didn't you pick it up? Or do you feel they were alright with the problem-solving activities, their thinking activities?</p> <p>I cannot think now, but maybe tonight, it may come to me. But I didn't experience it today. Maybe tomorrow I will think, there was a problem here.</p> |   |
| <p>Teacher-Centred</p> <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>All the learners were very excited to play this game, but only a few (6) had the opportunity to do this, whilst the group watched. The teacher did assist the learner, but did not engaged in any discussion or guiding questioning.</p>   | <p>The learners learn a lot because they learn to play. They don't know that they are learning but they are learning. They like to be involved in all activities.</p>  | <p><b>Computer time</b><br/> <i>The teacher sat in front with one learner facing the computer. Two games were played i.e. one where the learner had to match the size of the shoes with the size of the people's feet. The other game involved counting cookies out to give to a horse.</i></p> |
| <p>Teacher-Centred</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of open-ended questions which made an</p>   | <p>However, in this teacher-directed activity, there was no discussion of the pictures, predicting what the story was about, judging on the title page or encouraging creative thinking by asking what do you think are going to happen next after a story page was "read".</p>   | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding storytime.</p>   | <p><b>Storytime</b><br/> <i>The teacher read a story to the learners from a big book with lovely pictures. The learners merely listened.</i></p>  |

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| appeal to learners' creativity, thinking, reasoning and problem-solving skills |  |  |  |
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## ANNEXURE U

**SILENT THEMES IDENTIFIED FROM EXTRACTS FROM A TRANSCRIPTION OF AN INDIVIDUAL INTERVIEW [PARTICIPANT 3] COMPARED WITH A TRANSCRIPTION OF AN AUDIO VIDEO TAPE OF CLASSROOM ACTIVITIES OF PARTICIPANT 3**

| Silent Themes  | Motivation for a “Silent Theme” being identified [inconsistencies and paradoxes, which occurred between the teachers’ beliefs, feelings, knowledge and experiences in their classroom activities]. | Extracts from transcription of individual interview regarding the teacher’s beliefs, feelings, knowledge and perceptions  | <i>Transcription of audio video tape of classroom activities</i>   |
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| Lack of open-ended questions which made an appeal to learners’ creativity, thining, reasoning and problem-solving skills | The teacher did not ask any problem-solving or questions that would involve creative thinking during the theme discussion  | The participant did not share any beliefs, feelings, knowledge and perceptions regarding the theme discussion activity.   | <b>Theme Discussion</b><br><i>The learners were sitting on the carpet, facing the teacher and the theme table. A discussion on farm animals took place, with lots of interaction between the teacher and the learners. Guiding questions were being asked by the teacher to learners and individual learners voluntarily shared their knowledge and experiences about the topic. The teacher integrated numeracy concepts spontaneously in her discussion and questions i.e What is that on the top left? She let learners experienced by touching and holding the difference between a large ostrich egg and a small chicken egg.</i> |
| No silent theme  | No contradiction between what the teacher believed and what she practically implemented in her classroom.  | Ja, soos vandag kon hulle gekyk het wat sink en wat dryf toe ons met die saadjies gewerk het en wel, dis nie regtig problem oplossing nie maar dis denke.<br>Daar was wel problem oplossing – die dogtertjie wat die vergrootglas verkeerd vasgehou het.<br>Dis reg, en toe omgedraai het en toe self gesien het en die probleem opgelos het. | <b>Science /Discovery Table</b><br><i>At this table, the learners spontaneously experimented whether certain leaves or seed can float or sink. They discovered that leaves have veins when they looked through a magnifying glass. The teacher encouraged learners to be involved with experimentation. A learner experienced a problem, but through self-discovery rectified it: at first she took the magnifying glass and then put leaves on top of it. She</i>   |

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|                 |   |   | <p><i>realized something was wrong and through experimentation, she came to the conclusion that she needed to put the leaves under the magnifying glass and used a little bit of distance to see the total picture of the leaves having veins. The teacher guided learners through questions to look at the veins of the leaves</i></p>  |
| No silent theme | No contradiction between what the teacher believed and what she practically implemented in her classroom. | <p>It must be practical. It is important to understand concrete concepts before moving on to abstract concepts.</p> <p>Ja<br/>Think my learners have a numeracy background. Glo jy ook daaraan dat leerders skool toe kom met reeds</p> <p>In 'n mate. Hulle kan gewoonlik al tel reeds, en dan maak ek net seker of hulle kan voorwerpe tel. Daar is 'n mate daarvan maar nie</p> <p>Het hulle 'n getalsbegrip of tel hulle maar net meer 'n rympie?</p> <p>Nee, nie almal het 'n getalsbegrip nie. Maar daar is 'n persentasie wat kan 1 vir 1 kan tel, wat nie net maar 'n rympie sê nie. Hulle kan voorwerpe 1 vir 1 tel.</p> <p>Dis die verskillende konsepte wat jy wil bereik, dat hulle 'n konsep het van, soos getalsbegrip,<br/>Nee ek sou sê dis deel van die assesseringstandaarde.<br/>So dis goed dat hulle dit nou meer uitgestippel is<br/>Interessant wat jy baie sterk vandag gedoen het, was die horlosie tyd. Die konsep van tyd beweeg aan, dat jy baie keer na die horlosie terug verwys het. Wat nie regtig 'n assesseringstandaard is nie. Die assesseringstandaard se Oggend Middag<br/>Dis net 'n tydsbesef op 'n ander vlak.<br/>So jy het eintlik vir my daar begin om beyond te gaan<br/>Dis vir my goed want die assesseringstandaarde,</p> | <p><b>Concepts</b><br/><i>The teacher exposed the learners through-out the day to time as a concept. She used the alarm clock and pointed out to learners when an activity was going to begin or end i.e. they will be back when the long hand is at the 7. Above activity was repeated when the learners were busy with creative activities and she warned them that in 5 minutes they are going to tidy up, when the long hand has thus moved from the 4 to the 5.</i></p> |

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|  |  | <p>soos ek dit verstaan, is die minimum, ons kan verby gaan.</p> <p>Ja. Jy sien, in die oggend het ons gepraat van daai, toe ons begin het, watter dag is dit, watter seisoen is dit, en ons doen elke dag jy weet, watter soort weer is dit, wat is die datum en wat is die dag en watter tyd is dit. As die son opkom is dit in die oggend en as die son ondergaan is dit in die aand. En al daardie tydgoeters doen 'n mens baie, ek verstom my partykeer dat hulle na al die herhaling, soos met die dae van die week jy weet, deurmekaar raak. Hulle kan die rympie sê maar dan sê ek dis vandag Woensdag, watter dag was dit gister of gaan dit more wees, dan sê ek wat volg voor, daai voor agter moet jy ook orals inwerk</p> <p>Maar dit wys jou jy kan numeracy orals inwerk, selfs al doen jy net tyd, voor, na tipe ding is dit as jy met wiskunde werk.</p> <p>Ja, definitief. So jy sê ook voor, na ons kan van daai konsepte ook hier inbring by tyd. Kom ons kyk gou vinnig, hulle het baie sterk op kleur gefokus, dat dit konkreet moet wees, dis hoekom jy sukkel met tyd, want soos jy sê, tyd kan jy nie altyd konkreet</p> <p>Nee</p> <p>Weet jy hoe swaar is dit baie keer vir hulle om, ons het hierdie kaartjies vir hulle, sê nou maar hierdie ou bak koek, en hulle moet dit nou sit van begin tot end, sulke goed, ek wil nou juis daarop 'n bietjie konsentreer, hoe volg dit. Die outjie staan in die oggend op, watter prentjie moet eerste wees? Nou het hy aangetrek, nou doen hy dat</p> <p>Wat vir my baie oulik was, was die ontdekking wat jy ingebring het van die kleure; wat gebeur as jy hierdie een met daardie een meng? Gaan kyk op die kleurkaart, watter kleur het jy nog nie gehad?</p> |  |
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|                 |   | <p>Dis ook om hulle gewoon te maak van wat lees is, om simbole, dis basies hoe hulle lees, af van die kaart. En as jy bak en brou doen, maak jy ook sulke kaarte wat jy teken op en dan lees hulle die resepte af.</p> <p>Die groep voel dat counting die belangrikste aktiwiteit of konsep is wat moet plaasvind. Stem jy saam of verskil jy? die groep voel dat counting die belangrikste aktiwiteit of konsep is wat moet plaasvind. Stem jy saam of verskil jy?</p> <p>Nee, ek dink almal is gelyk soort van, die een kan nie sonder die ander een nie. Jy weet as jy wiskundig wil ontwikkel soos begrip van posisie in die ruimte, voor, agter, daai tipe dinge. Ek kan nie sê dis die belangrikste nie. Dis alles ineen, jy weet, alles skakel inmekaar om die wiskundige begrippe te vorm, jy kan nie een uitsonder en sê dis belangrik nie. Counting gaan hulle nie help as hulle alleen daarop konsentreer nie. Al hierdie ander dinge het 'n plek.</p> |  |
| No silent theme | <p>A lot of discussion, thinking skills problem-solving skills and creative skills were stimulated. Through the play and movement actions, learners experienced balance, speed, height, as well as had practical exercises in crossing the midline, what is in front, behind, under etc. Thus numeracy concepts were integrated in such a playful but purposeful manner that concepts were re-enforced.</p> | <p>Dit is baie belangrik dat die leerder betrokke is. Ek meen hy moet nie net 'n aanhoorder wees nie. Hy moet prakties betrek wees. En soos wat ons geleer het, hy leer deur sy liggaam, deur sy gevoel en sy betrokkenheid is van die bekende na die onbekende, van die maklike na die moeilike, uhm, sodat 'n mens dit soos 'n trap vat, trap vir trap. Maar die leerder moet aktief betrokke wees.</p> <p>Die een ding wat jy nie moet doen nie, is om vir hom 'n vrees daarvoor te laat op te bou nie. Jy moet voorkom dat 'n negatiewe assosiasie opgebou is en as daar is moet jy probeer om dit aanvaarbaar te maak deurdat dit 'n pret ondervinding te maak en</p>  | <p><b>Movement Activities</b></p> <ul style="list-style-type: none"> <li>• Obstacle course</li> <li>• Walking on stilts</li> <li>• Hop Scotch</li> <li>• Step and catch bean bags</li> <li>• Thrown and catch ball with cut off plastic bottle racquet</li> <li>• Perceptual activities</li> <li>• Body identification activities</li> </ul> <p><i>The teacher explained the different movement activities which were set out prior to them coming out. She put next to each activity a number symbol. She asked each group to go to a certain number and be engaged in that movement activity. After a while, she rotated the groups by requesting them to go to a specific number and it's activity. The teacher rotated between</i></p> |

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|                 |  | <p>nie deur druk te plaas nie, sodat hy vry kan voel om te eksperimenteer. sodat hy blootgestel kan word al neem hy nie deel nie.</p>  | <p><i>the activities, encouraged learners, verbalized their actions and stimulated their creativity by asking them to move or demonstrate different movements. The teacher participated with the whole group in gross motor perception movement activities, showing them the correct way which was left and right as well as identifying body parts.</i></p>  |
| No silent theme | Numeracy concepts were spontaneously integrated and the teacher built on the learners existing knowledge and experience. | <p>Ja, soos wat ek in my dagprogram werk ek nie noodwendig op 'n spesifieke tyd nie maar jy kan dit orals invleg. Jy kan elke geleentheid gebruik om van dit by te werk. Jy kan orals getalle inwerk. So ek probeer om hulle baie blootstelling te gee.</p>  | <p><b>Eating snacks</b><br/> <i>After the teacher and learners prayed together, the learners sat at the tables and ate the lunch they brought to school. The teacher discussed with learners what they brought to school and linked it with their theme discussion i.e. one learner brought yoghurt and it was re-inforced that yoghurt was made from milk. She also discussed the shapes that the sandwiches were cut and praised good manners.</i></p>  |
| No silent theme | No contradiction between what the teacher believed and what she practically implemented in her classroom.                | <p>Die een ding wat jy nie moet doen nie, is om vir hom 'n vrees daarvoor te laat op te bou nie. Jy moet voorkom dat 'n negatiewe assosiasie op-gebou is en as daar is moet jy probeer om dit aanvaarbaar te maak deurdat dit 'n pret ondervinding te maak en nie deur druk te plaas nie, sodat hy vry kan voel om te eksperimenteer. sodat hy blootgestel kan word al neem hy nie deel nie,</p> <p>Hoe hanteer jy 'n kind wat negatief is teenoor gesyferdheid?<br/>         Wel ek probeer maar, wel ek plaas geen druk. Ek probeer basies dat hy net daaraan blootgestel is en dit as pret ervaar deur dit so aan te bied. En net stadig begin aan te moedig dat spontane deelname plaasvind. Dat hy nie bedreig voel daardeur nie. En prys hom. Aanmoediging om 'n taak te lewer en om hom belangrik te laat voel en baie daarvoor geprys word en sodat hy net vry kan</p> | <p><b>Creative activities</b></p> <ul style="list-style-type: none"> <li>• <i>Discovering and mixing of different colours according to a colour chart</i></li> <li>• <i>Draw freely farm animals/farm picture</i></li> <li>• <i>Animal collage =Tearing strips of paper into large/small strips and paste it on a cardboard and then paint with glue and sprinkle dried tea leaves over it.</i></li> <li>• <i>Tracing with a finger, then following with a crayon and then finally cut out shapes on a worksheet</i></li> <li>• <i>Connecting dots and make your own funny/scary picture</i></li> <li>• <i>Model with dough farm animals</i></li> </ul> <p><i>The teacher introduced the learners to the various activities and then circulated between the tables. At each table, she assisted learners by asking them questions what will happen if this colour and that colour are mixed. Does the new colour appear</i></p> |

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|                 |   | <p>voel om homself te wees.</p> <p>Jy moenie enige van die ontwikkelingsfases uitlos nie, nie te vinnig na abstrak te beweeg nie, jy moet, netnou toe ons begin het met die learner involvement het jy gesê jy begin met die kind se liggaam en dat hulle baie sterk kineties werk en tas en dat hulle baie sterk kineties werk en tas senses sintuie werk daarmee. ...in veral jou kreatiewe aktiwiteit was daar veral geweldige aksie van die klei wat hulle met die hande kon vorm, was daar waar hulle met die vingertjie om kleure te meng en voor hulle kon knip moes hulle ook die vinger gedruk het. Dit het ook baie sterk deurgekom. Ja, ek is glad nie 'n voorstaander van werksvelle nie. Tot 'n mate het hy sy plek, as jy seker gemaak het, jy het die voorafstappe deurgegaan, dat jy dit nie te gou vir hulle aan bekend stel nie en soos ek doen dit eers in die laaste ses maande.</p> | <p><i>on the colour chart? When a learner discovered a new colour [navy] which was not on the colour chart, she praised him and showed his picture to the learner. Whilst the learners were busy, she verbalized the colours which were being used. When the teacher realized that the dough activity was not kicking off, she sat at the table and posed questions to learners, inviting them to tell her about the animal they were making. Spontaneous discussions between learners also took place i.e. when they had to connect dots to make their own picture, one learner told the other one how he thought it should be done, and the other one showed his disagreement. The teacher invited learners to share with the group their dotted pictures and tell the group what it was all about. She let learners paint freely when they finished the mixing of colours.</i></p> |
| No silent theme | <p>In this activity, the teacher made use of questions in a fun way, to stimulate learners' thinking and memory skills. Numeracy concepts were spontaneously integrated into this activity.</p> | <p>Nogal 'n ding wat altyd opduik is posisie in die ruimte Posisie in die ruimte beïnvloed jou gesyferdheid dan ook ne, want jou getalsbegrip, hulle kan nie verstaan wat volgende is en hoe dit bymekaar uitkom nie.</p> <p>Ja, ja, soos as hulle byvoorbeeld uhm, pennetjiesbord doen, daai persepsie wat op die verteenwoordig die boonste ry, hierdie ry op die pennetjiesbord. Ek moet sê, jy weet, as jy bewus is daarvan, dan begin jy reg van die begin af, daaraan werk. Ek dink dit het al verbeter.</p>   | <p><b>Perception chart:</b><br/> <i>Learners sat on the carpet in a group, facing the teacher. The teacher held a perception chart in front of her, facing the learners and asked direction questions about the position of pictures on the chart. Learners responded individually. When learners were having a problem, identifying right and left, the teacher demon-strated it practically and correctly to them, and repeated the exercise for a few times. The teacher invited the learners to respond randomly and quickly [mental revision] by giving the opposite verb of what she was saying i.e. pretty/ugly. thereafter, she made a game of it and invited the learners to give</i></p>  |

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|                 |  |  | <i>the plural when she stated the singular i.e. 1 eye, 2 eyes.</i>  |
| No silent theme | <p>Although these activities were learner-centred, the teacher supervised and monitored the learners' play. From time to time, she interacted with learners, verbalizing their play and even inviting a learner who chose to build patterns with the abacus, to see what other patterns he can make. She pointed out to him that he made two patterns on the abacus, a pattern on the left and a pattern on the right.</p> <p>Again, numeracy concepts were experienced through play, i.e. height on the swings and jungle gym, balancing on the obstacle course and speed with the skipping of ropes and pushing tyres.</p> | <p>... 'n mens die groter prentjie vir hulle kan wys, wat ek vir jou gesê wat ek maak met getalle, sonder dat hy geïntimideer is of bedreig is. Hoe jy dit aanbied is 'n belangrike ding. Jy wil nog steeds sy selfbeeld behou, jy wil hom nog steeds oopmaak vir leer, oop hou vir leer en as jy soos jy sê iets beyond wil vat moet jy versigtig wees sê nou maar die een wat dit glad nie kan doen nie, nou laat toeslaan, dat hy nou moedeloos raak, jy moet weet wat jy doen.</p> <p>Ek wil terugkom in jou klas het ek dit baie sterk opgelet dat hier is geweldige gesyferdheidrykheid, jy het geweldig baie visuele kaarte, wat ook vir die kinders help. Hoe hanteer jy, hoe laat jy 'n kind betrokke raak by probleemoplossing en denke? Is dit deel van jou daaglikse roetine? Of hoe gaan jy te werk?</p> <p>Ja, dit word in elke faset van die dagprogram ingewerk. As hulle musiek doen, dan kan hulle self, wel dis nie probleemoplossing nie, maar kan hulle kreatiewe denke of as 'n mens storietyd het kan 'n mens vrae vra of uhm, om hulle te lei om die probleem op te los. Uhm, as enige een van hulle met 'n probleem kom, dan sal ek eers vir hulle sê maak 'n plan, 'n mens kan 'n plan maak, kyk of jy nie kan 'n plan maak nie. Dan die opvoedkundige speletjies wat hulle speel, party daarvan is daartoe, kan hulle help om probleem op te los. Of ek sal partykeer doelbewus 'n probleem skets, en dan vir hulle sê hoe sal jy dit oorkom? Ek sal sê jy moet altyd 'n plan kan maak. Ek het nou die dag vir hulle gesê wat as jy</p> | <p><b>Free-choice inside and outdoor play</b></p> <p><u>Inside:</u></p> <ul style="list-style-type: none"> <li>• Fantasy corner – dolls house &amp; police</li> <li>• Abacus</li> </ul> <p><u>Outside:</u></p> <ul style="list-style-type: none"> <li>• Sandpit</li> <li>• Swings</li> <li>• Jungle Gym</li> <li>• Pushing tyres</li> <li>• Skipping with ropes</li> <li>• Obstacle course</li> </ul> <p><i>Learners chose to participate and rotated in the various activities</i></p> |

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|  |  | in 'n winkel is en jy raak verwyderd van jou ma of jou pa? Kan jy 'n plan maak? Ek lei en lok hulle tot denke.   |   |
| Lack of organizing and managing the Grade R classroom to enhance numeracy skills | Although all the learners enjoyed and participated in a story, which was familiar to them, the pictures of the story were not always very obvious to them. By making use of the pictures in the wall of the fantasy corner, it was very busy as another story was also put up below the same pictures. The numeracy concepts of directionality [from left to right] and sequence [pictures followed a story line] were spontaneously integrated into this activity. The teacher also asked questions which focused on big/small, short/tall, based on the story details. She also asked problem-solving questions whereby the learners gave their examples of how they would have dealt with the situation or what other plan can be made?. Creative thinking was also encouraged, when learners thought beyond the obvious in addressing the problem-situation. A lot of discussion between the teacher and the learners about the story, happened spontaneously. | The participant did not share any beliefs, feelings, knowledge and perceptions regarding   | <b>Story – time</b><br>The teacher built a pavilion for the learners to sit on, whilst she and the learners recited the story, following big story flash cards which were put up in the fantasy corner.                                 |
| Lack of organizing and managing the Grade R classroom to enhance numeracy skills | The blocks were just stored in big baskets and not displayed in an attractive inviting way where all the same shapes were stored together, thus enhancing matching skills of learners.   | Stel jy hulle enigsins bloot aan blokkspel waar hulle met vorms werk?<br>Ek gebruik dit dikwels in die oggende, wanneer hulle nog nie almal hier is nie, en hulle aankom, net om 'n vrye keuse aktiwiteit te hê waar hulle met blokke kan speel.<br>Dan gebruik jy jou opvoedkundige speelgoed ook dan?<br>Ja<br>As jy legkaarte bou, ek sien daar is brainy blocks ook<br>Hulle is, ja, in klein groepies opgedeel dan doen hulle daai tipe van dinge. So jy sorg dat jy al die fasette bywerk soos manipulasie, ennum numeracy by het of visueel of ouditief, verskille sien. Die speletjies verskillende goed aanbied sodat hulle deur die week blootgestel is aan nie net een nie.<br>Maar jy sien dit kom nog later daarby maar dis nou basies soos ons nou die quiet play het, want dis basies opvoedkundige | <b>Educational Toys &amp; Games</b><br><i>Blockplay, puzzles and educational toys and games like brainy blocks , domino cards etc, were put out in the morning for learners to experience and play with when they arrived at school</i> |

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|  |  | speletjies wat ons het, en een is altyd numeracy, jy weet. Die een is manipulerend, waar hulle ryg of pennetjebord, of probleem oplossing of |  |
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## ANNEXURE V

**SILENT THEMES IDENTIFIED FROM EXTRACTS FROM A TRANSCRIPTION OF AN INDIVIDUAL INTERVIEW [PARTICIPANT 8] COMPARED WITH A TRANSCRIPTION OF AN AUDIO VIDEO TAPE OF CLASSROOM ACTIVITIES OF PARTICIPANT 8**

| iSilent Themes  | Motivation for a “Silent Theme” being identified [inconsistencies and paradoxes, which occurred between the teachers’ beliefs, feelings, knowledge and experiences in their classroom activities].  | Extracts from transcription of individual interview regarding the teacher’s beliefs, feelings, knowledge and perceptions | <i>Transcription of audio video tape of classroom activities</i> |
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| Lack of organizing and managing the Gr R classroom to enhance numeracy skills | <p>The classroom was unorganized and had a space problem. The pictures and posters on the walls were crinkled and folded. The posters were placed haphazardly next to one another i.e. the name list of learners belonging to a group was placed next to a poster depicting a rule “Moenie hardloop in die klas nie” which was placed next to a birthday chart – no real connection with each other. Files and boxes were stored on the racks instead of being put nicely away in a cupboard. Numeracy posters such as a birthday chart, a dilapidated weekly weather chart of the previous week [not completed for Thursday and Friday], opposites chart and calendar were placed on the walls. The untidy teacher’s table took up unnecessarily space in the classroom.</p> <p>The shelves were not neat, stocked with untidy equipment such as tins with dirty paintbrushes, pieces of paper etc.</p> <p>Individual drawings of learners were displayed on the wall, but not of all 46 learners. These pictures were not placed nicely and had curled edges.</p> | The participant did not share any beliefs, feelings, knowledge and perceptions regarding the theme discussion activity.  | <i>Classroom Management &amp; Organization:</i>                  |
| Discipline problems   | The teacher had no control in her classroom. Whilst she was busy discussing or instructing learners. Some learners were eating, walking around, fiddling and even stumbling and falling. There was always more than one discussion going on at the same time even whilst the teacher was giving instructions or trying to explain to the learners what must be done. Sometimes the teacher tried to have discipline but in vain.  |  |  |

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| <p>Lack of developmentally appropriate practices</p>   | <p>Later, during creative activity time, learners sat on the cupboards, even stood on the cupboards</p> <p>Right through the day the teacher experienced discipline problems with learners moving up and about, climbing and lying on shelves. Very seldom, was there a hushed atmosphere in the class, mostly it was chaotic with a lot of noise. In whole group situations, a lot of learners were not concentrating. Even during story time, the teacher experienced discipline problems with learners running around, shouting, fighting and ignoring the teacher at all. When a learner was retelling the story, the class was making such a noise that the learner could not be heard.</p> <p>During creative activities, some learners ate, other paged standing up a book at creative tables, others just dwindled time without being actively involved in the activities. There was a lot of noise in the classroom. The book corner was not set up invitingly and the books looked dilapidated, even though the teacher informed them that it was a new batch of books, only being received the previous day. The learners did not know how to handle a book correctly or even with respect i.e. eating an orange whilst paging through the book</p> |   |  |
| <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> <p>Lack of organizing and managing the GR classroom to enhance numeracy skills</p> <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, and reasoning and problem-solving skills</p> <p>The teacher</p> | <p>Although the learners were sitting on the carpet, the teacher was standing in front of them - there was thus no real eye contact between the teacher and the learners.</p> <p>No theme table which displayed 2-D Pictures and Posters of different animals or any 3-D objects like houses, farm and wild animals. No books about animals. THUS no provision for enrichment or remedial activities</p> <p>The teacher asked closed questions regarding the pictures. No problem-solving questions were posed during this activity.</p> <p>The worksheet [A4] was too small for 46 learners to see at first glance. It was not coloured in and did not look attractive. No individual attention was given to learners as questions were asked to no one</p>   | <p>Remedial activities?<br/>Dis 'n groot leemte..<br/>Soos byvoorbeeld, die tel, as ons miskien tel, ek sien daar is 'n kind wat miskien tel, dan skip hy<br/>Hy skip, so hy kan nie een tot een tel nie?<br/>So hy kan nie, as hy op sy vingers ook tei, ny kan 1,2,3,4,5<br/>So hy kan nie chronologies tel nie?<br/>Ja<br/>Of hy kan dit doen vir so 'n rukkie maar as hy 1 fisiek moet wys, dan kan hy dit nie doen nie?<br/>Hy kan dit nie doen nie.<br/>Hy kan dit nie doen nie.<br/>Goed, sal jy vir my sê, hulle manier van skryf of teken, is daar enige probleme?<br/>Nee.<br/>Is daar 'n paar kinders wat jy gevind het, wat byvoorbeeld as hulle 'n 6</p> | <p><b><u>Daily Programme</u></b></p> <ul style="list-style-type: none"> <li>• <b>Early morning ring [greetings, theme discussion, numeracy]</b></li> </ul> <p><i>The learners were sitting on the carpet, facing the teacher, whilst the teacher was organizing the groups where they are going to work i.e. the dough. The teacher instructed the learners to greet me and then she asked them how they were.</i></p> <ul style="list-style-type: none"> <li>○ <b>Early morning ring with worksheet discussion based on the theme: Animals</b></li> </ul> <p><i>After the teacher requested learners to give her answers regarding how many shapes and which group of shapes were the most, the teacher instructed the learners to work at the tables in groups at the creative</i></p> |

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| <p>herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p>          | <p>specifically and some learners shouted out the answers whilst the majority kept quiet or did their own thing, not really listening to the teacher, for example one learner was sitting at the table, facing the learners, just as the teacher, but not even looking at the picture. During the worksheet discussion no provision was made for learners who experienced barriers or needed extension.</p> <p>The counting of the animals were vague and abstract – it would have been better if the teacher made a separate worksheet, coloured in the various animals, cut it out and placed it on the original worksheet. It would then assist learners to take off in each row the animals which belonged to a specific group and then counted them – thus, identifying, matching and sorting, basic mathematical concepts and skills would have been demonstrated in a hands-on approach.</p> | <p>maak, dan lyk dit soos 'n 9? Wat hulle die syfers omdraai? Omdraai? Nee. Nie regtig nie? Goed. Kom ons kom weer terug na die remedial activities, vind jy daar is enige ander barriers in jou klas? Nee. Outjies wat woelig is? O, ek het 'n hele paar, ek kan dit noem. Is dit? Wat 'n aandag tekort het nè? Dit ook. Hier is Hier is 'n hele paar Geweldig. En kan baie kere, hulle vat baie van die lesse af Enrichment? Wat verstaan jy onder enrichment? Enrichment is wat jy vir hulle kan bied om hulle te verryk. Ek doen dit met van die outjies, daar is 'n hele paar oulikes. Ek gaan met hulle voort, dië wat betrokke wil wees. Ek gaan nie 'n kind forseer nie. As hy nie betrokke wil wees nie, Dan gaan ek met die anders aan, wat belangstel. Want daar's 'n hele paar kinders wat baie, heelwat woelig is en ek kan nie dat hulle my onderkry nie. As ek saam met daai outjies gaan, dan gaan ek daardie kinders verlore. Hoe doen jy dan met hulle enrichment? Ek het vir hulle sekere werkvelletjies wat ek vir hulle gee. Vir hulle is die speletjies, hulle is verby die speletjies, so hulle is in die opset wat hulle in skool terme, dit voel vir hulle Ek begin al met letters en Ja, ek werk meer formeel.</p> | <p>activities – to draw, The teacher discussed a worksheet with animals on it with the learners, asking them which animal was the first picture [a sheep], the second one [a cat] an a third picture [an elephant] She asked the learners whether the animals area house, farm or wild animal? She showed them that at the bottom of the worksheet, there were pictures depicting a house, bushes and farm, She asked them how would they knew it was a farm? One of the learners answered that the farm picture had a tractor on it. The teacher instructed the learners to count how many house animals, wild animals and farm animals there were on the worksheet and to write the number symbol next to the house/bushes/farm pictures in the blank circle space. The teacher identified each picture with the learners, asking them in which group each animal picture belonged to and then counted in each row how many animals belonged to a group.</p> |
| <p>Teacher-Centred</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> | <p>Although the teacher instructed the learners what to do with the worksheet, no worksheet was being done during creative activities.</p> <p>Tables for creative activities were set out i.e.</p> <ul style="list-style-type: none"> <li>• Threading fishes –learners played aimlessly with the fishes, not really threading or if they do thread, they do not complete threading around the carton fish figure</li> <li>• Drawing with JIK onto blue</li> </ul>   | <p>Sal jy sê dis 'n bietjie van 'n dissipline probleem? Hulle luister nie na wat jy sê nie? Dat hulle nie reg luister nie? Ek weet nie. Hulle eie ding wil doen, en jy kan maar net sê wat jy wil, hulle luister nie Hoeveel kinders is aggressief in jou klas O, dis 'n hele paar. Ses, tien. Ek kan sê amper tien. Ja, en dit kom meer voor</p>  | <p><b>Creative activities</b></p> <ul style="list-style-type: none"> <li>o Early morning ring with instructions regarding creative activities.</li> <li>o Early morning ring with instructions regarding creative activities.</li> </ul> <p>The teacher again instructed learners what they were going to do at the creative tables i.e.</p>   |

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| <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p>   | <p>painted backgrounds – although the teacher instructed the learners to draw themselves, she was not supporting, guiding and motivating the learners nor did she asked them scientific questions i.e. “Can you see what you are drawing? Why can you not see it? What happens after a while? Why did it happen?”. This activity was merely done for the sake of having a small motor painting activity.</p> <ul style="list-style-type: none"> <li>• Moulding with dough – the learners aimlessly moulded the dough. One child was eating his orange whilst moulding the dough from time to time.</li> <li>• Reading in the book corner</li> </ul> <p>Not all the learners were involved in the creative activities. Some learners wanted to play and started to wrestle with each other, as no provision was made for them to be engaged in educational toys or fantasy play. There was no rotation of groups during the creative activities as the teacher informed me that the same activities would be on display for the rest of the week and all groups would have by then participated in the main activity of painting with JIK.</p> | <p>by die seuns. By die meisies ook, maar die seuns is baie aggressief. Dink jy nie dat hulle aggressief raak omdat bronne baie beperk is? Bronne baie beperk is. Ja. Ek weet nie hoe dit gebeur nie. As ek nou ‘n boks uithaal, ek moet net een boks gebruik. Want as ek een boks uithaal, en ek sit die boks in ‘n houer, dat dit mos mooi lyk, Ek sit dit in ‘n houer sodat hulle kan sien ook, deurskynende houer, dan as ek netnou kyk, Ja, dit breek. Hulle kan nie reg daarmee speel nie, ek is te bang, ek kry nuwe speelgoed, wat gaan hulle met dit. Sommer die eerste maal as dit uitkom, Dan storm hulle en breek alles. Verniel? Die kinders is, maar ook seker omdat jou grootte van die klas speel ook ‘n rol, want jy is besig met een groepie, dan hardloop die ander groep rond nè?</p> <p>Ja, ja. Ek kan nie my rug draai nie. As hulle miskien so vyf in ‘n groep is, 5-5, Ek kan dan makliker draai en sê, doen julle; ek kan een identifiseer, maar as hulle so groot is, dan kan ek nie hulle identifiseer nie; iemand maak ‘n geluid, dit klink dis daar maar dan is dit nie daar nie. ... jy het’n groot leemte in jou klas opset in die opsig dat jou klas oor, over-crowded is? En dit kom na gedrag en dissipline probleme</p> <p>Ja.</p> <p>Wat dit vir jou baie moeilik maak om te laat leer? En daarom fokus jy egter net op die sterk outjies; die ander outjies verloor jy? Want as jy heeldag aan hulle moet aandag gee, gaan jy heeldag skree en raas. En dit kan jy nie doen nie?</p> <p>Ja.</p> <p>Dis ‘n groot probleem en ‘n groot frustrasie vir jou nè? ‘n Groot frustrasie! Daarom dat ek daai maand wat</p> | <p>colouring animals. The teacher instructed the learners to colour the farm animals with a pink crayon, the wild animals with a brown crayon and the house animals black. She then instructed them to count how many black pictures there are and then to write the number in the circle. They were to do the same with the brown and pink animals.</p> <p>The teacher called specific learners to participate at the painting table. Although the teacher rotated to different tables, her focus was on the painting table.</p> |
| <p>Discipline problems</p>  | <p>One learner found a toy piano and started playing on the floor with it. Other learners found a ball and started kicking it in the classroom. The learners were bored with the activities and longed to have free-play with other stimulating apparatus. Therefore, they took their own initiative and started to wrestle, play with a ball, climb on the shelves etc. to get rid of their frustration and energy. The teacher took a laissez-faire approach and has no control over her class.</p>   | <p>Ja.</p> <p>Wat dit vir jou baie moeilik maak om te laat leer? En daarom fokus jy egter net op die sterk outjies; die ander outjies verloor jy? Want as jy heeldag aan hulle moet aandag gee, gaan jy heeldag skree en raas. En dit kan jy nie doen nie?</p> <p>Ja.</p> <p>Dis ‘n groot probleem en ‘n groot frustrasie vir jou nè? ‘n Groot frustrasie! Daarom dat ek daai maand wat</p>  | <p>colouring animals. The teacher instructed the learners to colour the farm animals with a pink crayon, the wild animals with a brown crayon and the house animals black. She then instructed them to count how many black pictures there are and then to write the number in the circle. They were to do the same with the brown and pink animals.</p> <p>The teacher called specific learners to participate at the painting table. Although the teacher rotated to different tables, her focus was on the painting table.</p> |
| <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>Although the teacher stood by the drawing table, no discussions took place. All the activities were done haphazardly, with no real planning by the learner what he/she wants to do [painting and moulding] or any completion of the task [painting, moulding, threading] The teacher did not encourage the learners to discuss what they were doing, why they were doing it or what they planned to do. There was no problem-solving. Although exploration with the material [painting, dough, threading] did</p>  | <p>Ja.</p> <p>Wat dit vir jou baie moeilik maak om te laat leer? En daarom fokus jy egter net op die sterk outjies; die ander outjies verloor jy? Want as jy heeldag aan hulle moet aandag gee, gaan jy heeldag skree en raas. En dit kan jy nie doen nie?</p> <p>Ja.</p> <p>Dis ‘n groot probleem en ‘n groot frustrasie vir jou nè? ‘n Groot frustrasie! Daarom dat ek daai maand wat</p>  | <p>colouring animals. The teacher instructed the learners to colour the farm animals with a pink crayon, the wild animals with a brown crayon and the house animals black. She then instructed them to count how many black pictures there are and then to write the number in the circle. They were to do the same with the brown and pink animals.</p> <p>The teacher called specific learners to participate at the painting table. Although the teacher rotated to different tables, her focus was on the painting table.</p> |

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|  | take place no real numeracy concept development took place i.e. with threading the teacher could have assisted by asking the learners to start from the top, to go in and out and around until the come back to the top – thus an oval movement where the beginning and end meet each other.   | ek siek was, het ek sommer 2 dae by die huis gebly   |  |
| <p>Lack of developmentally appropriate practices</p> <p>Discipline problems</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>Whilst the teacher is setting out the hoops, learners were sitting around, bored and eventually started to throw small stones at each other. Whilst some learners were jumping, the others were bored and started fighting and crying. The teacher's attention was to regain order and did not observe, encouraged and motivated the learners jumping. The jumping activities were done just for the sake of jumping. Numbers in Hoops a bit chaotic, learners did not really understand what was expected of them, and just run around. When the whistle blew and a number was called, they just went to any hoop, no matter how many learners there were already.</p> <p>Thus, all activities were teacher-centred [especially the ball activity], teacher-directed [jumping in the hoops] and teacher-controlled [running around hoops and grouping according to numbers]. No individual responses or creativity were invited. The teacher gave the command and the learners had to respond. No discussion of why the learners are executing certain actions, took place between the teacher and the learners. Although the learners did do outside movement activities, they were not invited to do any creative and problem-solving i.e. show me the different ways you can stand, jump in the hoop, what can you do with a hoop, etcetera. There was no calming down activity before the learners go to the classroom – they were excited and very active and busy.</p> | <p>Hulle moes die diere tel, die verskillende .... en toe moes hulle ook die doppies tel, toe jy vormpies met hulle gedoen het nè? Waar, hoekom het jy besluit om te tel? Dis mos wiskunde, ek konsentreer op die wiskunde.</p> <p>Ja, ja, hulle moet, elke dag tel, sodat hulle bewus kan wees van getalle</p> <p>Getalle. Tel jy net met hulle of doen jy ander goed ook?</p> <p>Nee, ek doen ander dinge ook. Geletterdheid, in dieselfde tyd wat ons die verskillende diere se name gedoen het, so hulle het geletterdheid ook, so basies, dit integreer.</p> <p>... as jy sê inhoud, is daar, het jy enige riglyne wat vir jou sê as jy, jy moet hierdie aktiwiteite doen, wat vir jou, waar kry jy dit?</p> <p>Die dokumente</p> <p>Vind jy dit help jou, gee vir jou riglyne?</p> <p>Ja, ja. Dit help mens, geweldig.</p> <p>Ons praat nou meer van die assesseringstandaarde ...in die beplanning, help dit daarmee ook?</p> <p>Ja.</p> <p>Voel jy dat jy almal dek in 'n jaar of is daar 'n klompie wat jy nie regtig by uitkom nie?</p> <p>Nee, ek kan nie almal nie</p> <p>Jy kan nie by almal uitkom nie? Ons praat van die wiskunde nè?</p> <p>Ja, onmoontlik.</p> <p>By al daardie assesseringstandaarde, sukkel om uit te kom?</p> <p>Ja</p> <p>Waarop fokus jy dan? Wat fokus jy dan hoofsaaklik by wiskunde op?</p> <p>Tel</p> <p>Want ek konsentreer meer op getalle van 1 tot 10.</p> | <p>• <b>Numeracy Content activities</b></p> <ul style="list-style-type: none"> <li>○ <i>Whole group ring discussing worksheet on animals</i><br/><i>The teacher asked closed questions regarding the pictures.</i></li> <li>○ <b>Whole group ring discussing worksheet on animals</b><br/><i>The teacher discussed the worksheet again with the learners. Whilst she was having a monologue, some learners were moving up and down, being restless. One of the learners got hold of a play gun and aimed at the teacher whilst she was demonstrating the number 3.</i></li> <li>○ <b>Whole group discussion on numeracy worksheet [for the 3<sup>rd</sup> time]</b><br/><i>After creative activities and tidy-up, the learners sat on the carpet, facing the teacher. She then again discussed the animal worksheet with the learners. Although she instructed the learners previously to colour in with black, brown and pink crayons, she let the learners now identify these colours. The teacher did not have a pink crayon and therefore she instructed them now to use red crayons. She made it clear that she did not want other colours being used except black, brown and red. She then briefly discussed with them what a pet animal was, and that they had to be coloured black. In order for the learners to grasp the black colour</i></li> </ul> |

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|  |  | <p>Sodat hulle dit kan vaslê. Dit is 'n probleem gewoonlik. Ek vra maar altyd vir die Graad 1 juffrouens, waarmee sukkel hulle?</p> <p>Okay, dis die getal 1 tot 10 wat jy wil<br/>1 tot 10 wat ek vaslê.</p> <p>Goed. Hoe lê jy dit vas?<br/>Net met tel?</p> <p>Nee. Sien en vorm voorwerpe</p> <p>As ek halving doen, dan is dit maar net basies 'n .... ek het al halving gedoen. Maar dan is dit net basies waar ek vir hulle wys</p> <p>Wys, soos as jy byvoorbeeld 'n lemoen sny?</p> <p>Nee, hulle sny dit nie. Ek wys net vir hulle. Hoe is dit as 'n mens iets deel in die helfte, dan is dit twee ... ek is bang vir messe.</p> <p>Jy wys vir hulle hoe, met watter, hoe wys jy dit vir hulle dan?</p> <p>Ek wys dit met 'n model, 'n papiertjie, en ek wys as hulle dit nie verstaan nie, op die bord.</p> <p>Wanneer doen jy constructing?</p> <p>Dis ook wanneer die groepies werk.</p> <p>Dis net nie vandag nie.</p> <p>... sequencing, is dit ook iets wat jy doen?</p> <p>Mmm.</p> <p><i>Data handling</i> data hantering, raak jy daaraan of is dit vir jou 'n vae ene?</p> <p>Nee, ek raak nogal nie daaraan nie.</p> <p>Massa? Dis nou meer <i>Measurement</i>, werk jy daarmee?</p> <p>Ek werk met dit ook.</p> <p>... estimation is dit iets, wat jy skatting doen of nie eintlik op hierdie stadium nie?</p> <p>Nog nie nou nie.</p> <p>. En <i>think and reason</i>. Het jy vandag, as jy vandag aan jou aktiwiteite terugdink, het jy vir hulle kans gegee waar hulle kan dink en redeneer? Of het dit nie so sterk deurgekom vandag nie.</p> <p>Um-mmm</p> <p>Dit het nie so sterk deurgekom nie?</p> | <p><i>concept the teacher asked them to show her who is wearing something black, like black shoes. The teacher instructed the learners to count and write the number symbol in the circle at the bottom of the worksheet. She requested learners to make a number 2 in the air, whilst she verbalized her demonstration of how to make a 2, 3</i></p> <p><i>Learners were bored some listened to the teacher, whilst others walk around the room, teased and wrestled with one another. Although the learners were told to complete worksheets, some learners preferred to play and took of the bear from the cupboard. One girl was sweeping the floor, in order not to participate in the activities.</i></p> <p><i>Some learners knew what to do whilst others just sat at the table with folded arms. The teacher was busy at the carpet, going through the worksheet once again. Next to her a boy was playing 'skelmpies' with a few lids on an upturned balancing board, with his backside facing the teacher. She did not reprimand or invited him to participate in the activities. She ignored him. A group of learners (4) sat next to her, made their own conversations.</i></p> <p>o <b>Counting 1,2,3,4 lids and identifying shapes</b></p> <p><i>The learners had to count shapes: triangles, circles and squares. They did not count it but had to remember how many of each there were. The teacher asked the group how many of each there were i.e. How many circles. The children shouted dif-ferent answers, eventually reaching consensus at 17 circles, 14 triangles and 13 squares.</i></p> |
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|  |  | <p><i>She then asked them which group was the most? Somebody said the circles, which she then confirmed that the circles were the most.</i></p> <p><i>The teacher handed out paper shapes [square, triangle and square] to the learners and the learners sat at the tables in shape groups. She went from group to group asking, holding up a paper shape in the air, why was it a square? She answered by saying it had 4 sides etc. At the square table, she asked the learners to take out one cold drink bottle lid and to place it in the middle of the shape. Once the learners placed their lids in the middle of the square, she requested the learners to show to her, how to make a number symbol 1 in the air. She then verbalized and demon-strated it in the air to the learners. Once they have finished copying her, they were instructed to fold their arms. The teacher went to the circle table.</i></p> <p><i>The teacher instructed the learners to take only 2 lids from the holder, which she held in front of them, one by one. She asked them to place it in the middle of the circle. She then requested the learners to count the lids by touching it with their fingers, 1, 2. The teacher also requested the learners to make a number 2 symbol in the air, by verbalizing and demon-strating it to them.</i></p> <p><i>The teacher moved on to the triangle table. At this table she instructed the learners to take 3 lids and place it in each corner of the triangle.</i></p> <p><i>Thereafter the teacher moved back to the square table. The learners had to count out 4 lids.</i></p> <p><i>The learners put away</i></p> |
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|  |   |  | <p><i>their lids and shapes and gathered on the carpet. The teacher told the learners what the worksheet was about. She invited a few learners to show her, one by one, which animals were farm animals and to count it with her.</i></p> <p><i>The teacher invited learners who still did not know what to do, to sit on the carpet whilst the others went to the tables and complete the worksheets.</i></p> <p><i>The learners at the tables were aimless engaging in completing their worksheets.</i></p>   |
| <p>Teacher-Centred</p> <p>Discipline problems</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of developmentally appropriate practices</p> | <p>All activities were teacher-centred [the ball activity], teacher-directed [jumping in the hoops] and teacher-controlled [running around hoops and grouping according to numbers].</p> <p>Whilst the teacher was setting out the hoops, learners were sitting around, bored and eventually started to throw small stones at each other. Some learners started fighting and crying. The teacher's attention was to regain order and did not observe, encouraged and motivated the learners jumping. The jumping activities were done just for the sake of jumping.</p> <p>The activity of Numbers in Hoops was chaotic; learners did not understand what was expected of them, and just ran around. When the whistle blew and a number was called, they just went to any hoop, no matter how many learners there were already. No individual responses or creativity were invited. The teacher gave the command and the learners had to respond. No discussion of why the learners are executing certain actions, took place between the teacher and the learners. Although the learners did participate in the outside movement activities, they were not invited to do any creative and problem-solving i.e. show me the different ways you can stand, jump in the hoop, what can you do with a hoop, etcetera. There was no calming down activity before the learners go to the classroom – they were excited and very active and busy.</p> | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding the theme discussion activity.</p> | <ul style="list-style-type: none"> <li>• <b>Movement Activities</b> [outside] <ul style="list-style-type: none"> <li>○ Hoops</li> </ul> <p><i>The teacher took the learners to the outside play area. She put out hoops in order for the learners to play "hopsotch". She requested the learners stood in a ring and started to throw a ball to each individual learner. Once the learner caught the ball and threw it back to the teacher, the learner had to sit down. She then let the learners, one by one jumped, but if they wanted to jump backwards, they were told only to follow the instruction, thus jumping forward, and running backwards and sit down. The teacher explained a new game which consisted of running around the hoops and then the teacher would call a number and learners must grouped themselves according to the number in a hoop.</i></p> </li> </ul> |

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| <p>Lack of going beyond the minimum requirements of the assessment standards</p> <p>Teacher-Centred</p> <p>Discipline problems</p> <p>Lack of developmentally appropriate practices</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills.</p> | <p>No discussion of the story took place. No introduction to the title, author and title page and picture, took place.</p> <p>The way the teacher held the pictures were also no very clear for the learners – it flipped backwards and the pictures were also shown for a short time.</p> | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding the theme discussion activity.</p> | <p>• <b>Story time</b><br/> <i>The teacher told the learners a story which they knew, namely the Three Bears, with the learners joining in.</i></p> <p><i>Despite the teacher reading/telling the story, learners were making a lot of noise. Some learners walked around in the classroom whilst one learner swept the floor. One boy was sitting next to the teacher, drinking from his water bottle, ignoring the teacher and her story. Only a few learners were listening to her. Most of the learners knew the story and some of them joined in at telling the story</i></p> |
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## ANNEXURE W

**SILENT THEMES IDENTIFIED FROM EXTRACTS FROM A TRANSCRIPTION OF AN INDIVIDUAL INTERVIEW [PARTICIPANT 9] COMPARED WITH A TRANSCRIPTION OF AN AUDIO VIDEO TAPE OF CLASSROOM ACTIVITIES OF PARTICIPANT 9**

| Silent Themes  | Motivation for a “Silent Theme” being identified [inconsistencies and paradoxes, which occurred between the teachers’ beliefs, feelings, knowledge and experiences in their classroom activities].  | Extracts from transcription of individual interview regarding the teacher’s beliefs, feelings, knowledge and perceptions       | <i>Transcription of audio video tape of classroom activities</i>  |
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| <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>Although the classroom was very small, it was print rich with numeracy [months of the year, name of the week, birthday chart, money chart, opposites, weather chart, 100 chart], life skills [My Body, South African flag] and literacy posters [Alphabet poster, Reading posters, rhyme cards] on the wall. A block play shelf and an unorganized educational shelf were placed in front of the class. The theme table was unorganized, with various papers lying around. It was not inviting and stimulating for the learners to explore and experiment and to discover the theme. A small area was allocated for fantasy and block play. The nature table was displayed on a shelf but was not inviting and easy accessible for learners to explore and discover. Books were stacked in colourful shelves, next to the entrance.</p> <p>Evidence of learners’ creative activities was displayed on the walls. However, all the learners’ pictures were the same. Creative art activities, such as dough, cutting and drawing, painting and worksheets were placed out on tables.</p> <p>The teacher had a relaxed atmosphere in her classroom and did not experience discipline problems, as she reminded the learners how to react in certain situations i.e. you must put up your hand if you want to answer.</p> | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding the theme discussion activity.</p> | <p><i>Classroom Management &amp; Organization:</i></p>  |
| <p>Teacher-Centred</p> <p>Lack of open-ended questions</p>   | <p>Due to the fact that the teacher asked the questions and the learners had to give the correct answer, there was no discussion of the time. The</p>   | <p>So jou daaglikse program is basies jou raamwerk?<br/>Ja.</p>  | <p><b>DAILY PROGRAMME</b></p> <ul style="list-style-type: none"> <li>• <i>Morning ring</i> <ul style="list-style-type: none"> <li>○ <i>Days of the week, months,</i></li> </ul> </li> </ul> |

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| <p>which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>teacher did not take any lead from the learners and the learners did not participate spontaneously, except when they were asked to answer questions. The teacher asked closed questions and received answers that were only correct or incorrect. If it was incorrect, the teacher immediately corrected it. Although questions were asked, it was not necessarily problem-solving skills or thinking skills that were enhanced but merely memorization skills as could be seen in the parrot style of answering the questions in a group.</p> | <p>Ja. Measurement, voel jy jy dek hom almal met die tydsgewys in? Want ek het vandag gesien jy het baie sterk op jou maande gekonsentreer, en jou seisoene.</p> <p>Ja.</p> <p>En jy het selfs 'n horlose uitgehaal waar jy informeel vir hulle gevra het, waar is die 12? Of die 6?</p> <p>En 7 wat jy uitgewys het, of hulle die syfer kan herken en nie soseer tyd lees nie?</p> <p>Ja, 'n bietjie syferherkenning</p> | <p><i>seasons</i></p> <p><i>The teacher was sitting amongst the learners in a circle formation discussing the days of the week.</i></p> <p><i>The teacher requested the learners to show her 7 fingers. The learners put 7 fingers in the air.</i></p> <p><i>The teacher requested the learners to count it whilst she was demonstrating it with her own fingers.</i></p> <p><i>The teacher requested a specific learner to tell her what the name of the month was. The learner could not answer but a friend answered that it was September. The teacher then asked: "Which number month is it?" a learner answered that it was the 9<sup>th</sup> month.</i></p> <p><i>The teacher asked which month was following September and a learner answered it was October. The teacher also asked which month came before September. When the learner could not answer the question she repeated the question, but this time in English and another learner answered that it was August.</i></p> <p><i>When she asked how many months there were in a year, some learners answered spontaneously as if in a group, in a parrot style: "Daar is 12 maande in 'n jaar".</i></p> <p><i>The teacher took a big toy clock and invited any learner to show her where the 12 was on the clock. When a learner showed her the correct number, she checked with the class whether he was correct and he was awarded with a round of applause by his peers. The teacher repeated this activity with the number symbol 7.</i></p> <p><i>The teacher then asked the learners how many seasons were there in a year? A learner answered again in a parrot style: "Daar is vier seisoene in 'n jaar". When the teacher asked which</i></p> |
| <p>Lack of developmentally appropriate practices</p>   |   |   |  |

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|   |  |  | <p>season it was currently, a learner said it in English but the teacher assisted her by saying it in Afrikaans namely Lente. The teacher then repeated that it was in English Spring but in Afrikaans Lente. The learners had to repeat in a group that it was Lente. When the teacher asked the learners how long a season was, a learner remembered the drill and said: "Vier maande lank". The teacher repeated that a season was 4 months long. The teacher then asked the learner which season came after spring? She guided them by saying it was a season when it became very hot. A learner then answered that it was summer. She also said that it was very cold before spring and then asked the learners which season it was? A learner responded by saying it was winter</p>   |
| <p>Teacher-Centred</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially remedial skills.</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of developmentally appropriate practices</p> | <p>The teacher sat in front of the Theme Table, thus only a few learners could see the display on the table. The teacher also handled the communication objects i.e. cell phone and radio, herself. The theme discussion was merely an exercise for learners to remember what was previously discussed about communication and they had to answer close questions. The teacher did some-times take the lead from the learners when they embroidered on the subject. Participation of the learners in the discussion was mostly restricted to answering questions. The teacher made use of English and Afrikaans so that all the learners could understand her.</p> | <p>...vat nou jou tema van vandag, wat was jou tema? Kommunikasie.</p> | <p>o <b>Theme discussion</b></p> <p>The teacher asked the learners what the name of the theme was and a learner answered that it was communication. The teacher repeated that it was <i>kommunikasie</i> in Afrikaans. The teacher then reminded the learners that one could communicate with the telephone. The teacher then showed the learners a cell phone. A learner responded by saying that it was "n opskuifene". The teacher then showed the learners a small radio, and saying one could listen to the news, stories. When a learner did not understand, the teacher switched to isiXhosa. When the teacher asked if the learners could see the people talking over the radio, a learner answered that they could be seen on TV. The teacher emphasized, first in English and then in Afrikaans, that people could be seen on television. The teacher</p> |

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|  |  |   | <p>reminded the learners that communication could also take place through letters, in English and Afrikaans. The teacher reminded the learners that they could also communicate through books. The teacher then started to discuss the front page of a book.</p>  |
| <p>Teacher-Centred</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills.</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of developmentally appropriate practices</p> | <p>Remedial problems occurred because some learners sat in such a way that the number line was facing them upside down. Thus the 6 could be read as a 9<br/>The 3 looked like a m<br/>The 5 was not correctly formed<br/>The 2 was not correctly formed<br/>The teacher did not give guidance to the learners who did not know what or how to form the number symbols</p> <p>The end results of the paintings were limited to radio and televisions.</p> <p>The teacher assisted learners with the worksheets, by instructing them what to do step by step. They executed her instructions. No questions were asked to ensure that the learner understood what the worksheet was about</p> <p>Although the teacher rotated amongst the various activities, she did not ensure that the learners really understood what they were expected to do. The learners merely responded to her instructions. There was limited free-choice regarding the creative activities, as the teacher instructed learners to work at specific tables. Only the</p> | <p>Goed, ek wil 'n bietjie oor die <i>thinking and reasoning</i>. Het jy dit baie ingebring vandag? As jy moet terug reflekteer op jou lessie vandag? Of voel jy dis ietsie wat jy meer kon ingebring het?<br/>Nee, ek kon dit meer ingebring het<br/>Is dit ietsie wat jy meer leiding nodig het?<br/>Ek sou nie so sê nie, E. Nie soos in die data handling nie.<br/>En probleem oplossing ook?<br/>Ja.<br/>By the Grade R learner in concrete form in order to lay a numeracy foundation for later abstract thinking and reasoning<br/>Dit is so<br/>Dis hoekom ons sê <i>thinking and reasoning</i> is baie belangrik. Probleem-oplossing, het jy dit êrenste ingebring vandag?<br/>Nee.<br/>Ek sal meer leiding moet kan kry in dit, probleem-oplossing</p> <p>... leernitkomste nommer 2 is ook patterns<br/>Patterns, dis die patrone<br/>In skeppende tyd het jy op 'n stadium daardie pennetjeborde uitgehaal dat hulle daarop patrone kan navolg?<br/>Sodat hulle kom kan lees en hulle tel ook, want daar is ook kleure verbonde. As hy sien daar is twee geles, moet hy kan tel hoeveel geles en twee geles uithaal<br/>Ja. Ek hou daarvan, die legkaarte en die pennetjeborde. Ek hou daarvan. Hulle moet dit gereeld doen.<br/>Ek sal sê <i>sequencing</i> kom ook by die pennetjeborde</p> | <ul style="list-style-type: none"> <li>• <b>Creative Activities</b> <ul style="list-style-type: none"> <li>○ <b>Mould with dough numbers 1,2,3,4,5,6</b></li> </ul> </li> </ul> <p>The teacher introduced the various creative activities and instructed the learners to work at specific tables.</p> <p>Although the teacher assisted from time to time, the learners were uncertain what to do at the dough table.<br/>One learner moulded the number symbols 1, 2,3,4,5 &amp; 6 but others were just rolling the dough.<br/>One learner experienced problems moulding a 2 and a 6 as the flash card was upside down and looked like a 9 to him<br/>The teacher scolded at the learners who did not mould anything<br/>One learner who had done nothing yet, reshuffled the number cards in a sequence from 1 to 6 on top of his dough board</p> <ul style="list-style-type: none"> <li>○ <b>Painting</b></li> </ul> <p>Learners had to paint pictures of radio and televisions</p> <p>The teacher assisted learners who experienced problems with the matching of objects and the numbers</p> <ul style="list-style-type: none"> <li>○ <b>Circle number 6 on worksheets with pencils</b></li> </ul> <p>The learners circled the "6" on the worksheets.</p> <ul style="list-style-type: none"> <li>○ <b>Drawing and cutting</b></li> </ul> <p>The learners coloured in the blocks and cut the lines to form lanterns.</p> |

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| <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p> | <p>painting activities held opportunities for free and creative paintings. No problem-solving questions were asked and learners were guided to complete their worksheets</p> <p>Learners participated freely with the educational toys. Unfortunately the free play was limited to about 15 minutes. The block play area was also too small.</p> | <p>in.</p> <p>is daar kinders in jou klas wat jy al geïdentifiseer het, wat barriers to learning het? Wat probleme om te leer het?</p> <p>Daar is een meisietjie, maar ek dink dis haar agtergrond ...sy is net so stadig, die meisietjie.</p> <p>Dan, die enetjie wat van die plaas af kom, maar ek dink hy was nooit blootgestel</p> <p>Ja en daarom is hy 'n bietjie stadiger as die res van die kinders.</p> <p>...is daar enige outjies vir jou wat leerprobleme het ten opsigte dat hulle omruiling doen? As jy byvoorbeeld 'n 6 gemaak het, dan maak hulle 'n 9?</p> <p>Ek dink daar is so twee, wat die 3 omdraai</p> <p>En die 7 ook</p> <p>Hoe hanteer jy dit dan?</p> <p>... ek gee vir hulle die playdough nè</p> <p>Dan laat ek hulle 'n bietjie speel daarmee,</p> <p>Dan wys ek vir hulle 'n kaart met die regte vorm van daardie letter, sodat hy dit kan kyk 'n paar keer en dit doen.</p> <p>Even, die dots, baie keer</p> <p>Op die werksvel.</p> <p>Ja, verskyn ook sulke aktiwiteite waar hy moet trace oor daai dots om die regte vorm en waar hy wys waar jy moet begin en waar jy moet omgaan en dan stop.</p> <p>... vind jy nie dat die werksvelle te moeilik is vir jou kinders nie?</p> <p>Ek sal nie sê dat die boek wat ek gebruik te moeilik is nie.</p> <p>Wel ek het een keer 'n week 'n werksvel wat gebaseer is op my tema. Soos kommunikasie, dié gaan oor tekens nè?</p> <p>Hy moet daai tekens kan lees, wat sê daai teken?</p> <p>Ek wil terugkom na die barriers to learning. Sê vir my, voel jy dat jy addisionele hulp en leiding nodig het</p> <p>Ek glo nie dis voldoende nie, want baie keer dan</p> | <p>Learners who completed their one activity, were allowed to build with counters</p> <ul style="list-style-type: none"> <li>• <b>Educational toys</b> <ul style="list-style-type: none"> <li>○ <b>Building with counters</b></li> <li>○ <b>Copying patterns with pegboard</b></li> <li>○ <b>Big block free play</b></li> <li>○ <b>Puzzles</b></li> </ul> </li> </ul> <p><i>Some learners engaged with pegboards and pegs to form patterns according to the pattern cards</i></p> <p><i>The teacher assisted a learner who was experiencing a problem in copying the pattern onto the pegboard.</i></p> <p><i>Some learners engaged with block play</i></p> <p><i>Some learners built puzzle cards</i></p> |
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|  |   | <p>identifiseer jy 'n probleem, maar jy weet eintlik nie wat om met daai probleem te doen nie. So as daar indiepte kan gegaan word, Ja daar is 'n leemte met die barriers to learning.</p>  |   |
| <p>Teacher-Centred</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills.</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of developmentally appropriate practices</p> | <p>The teacher requested the learners to look at her and positioned themselves in such a way that they also can see the flash cards. The teacher handled the counting flash cards. There was confusion with her pattern and the identification of how many claps she gave by identifying the correct number card. Before the teacher repeated this activity she said” “I do the clapping, you must listen” – thus the teacher was not only in control, but also the executor of actions. The learners’ role was restricted to listening and identifying the correct number flash card. However, the second time around, the learners understood what was expected of them and executed the correct actions. The third time the pattern was repeated, there was again confusion. The confusion can be attributed to the fact that the learners became bored and restless because they were not actively and hands-on involved with the activity. The teacher did not ask them to clap a pattern. The matching activity was more successful - the learners had to stand up and placed their cards in holders and match the cards with the dots.</p> | <p>Ja, soos vandag met die getal wat ek ingebring het, was die getal 6. En dit is verwant aan die werkvel wat ek vir die kind gegee het. Hy moet kan die getal items identifiseer met die getal homself, die prentjie wat daar is met die getal daarvan</p> <p>...ons fokus nou net op wiskunde se assesseringstandaarde, praat hulle van as ons nou by tel kom, die kind in Graad R moet van 1 tot 10 tel. Maar hulle praat ook van halving and doubling. Doen jy dit met die kinders of is dit nog te gevorderd vir jou? Hoe voel jy daarvoor?</p> <p>Wel, in my werkskedule het ek voorsiening ge-maak vir dit, want op 'n praktiese manier kan jy dit inbring. As jy byvoorbeeld, miskien lemoene vat, en baie keer op 'n Vrydag gee ons vrugte vir die kinders. En dit is nie altyd dat hy 'n heel vrug kry nie. En dan wys ek vir hulle, hierdie lemoen, omdat ons min lemoene het, kan ek dit in 2 of in 4 verdeel.</p> <p>So ek sien, jy bring daar die halving and doubling op 'n praktiese wyse in?</p> <p>Ja.</p> <p>Is daar van daardie wiskunde assesseringstandaarde waarom jy 'n bietjie onseker voel? Of dat jy nie altyd by almal uitkom nie?</p> <p>Ek sal sê 'n assesseringstandaard, die uitkoms nommer 5, Data handling, is 'n bietjie moeilik omdat die kinders, as jy vir hulle sê, bring vir my iets van die huis af, sodat ons dit kan op 'n grafiek sien?</p> <p>Ja. Dat hulle dit doen nie. So dis baie keer moeilik om daardie een te dek.</p> <p>Voel jy dat jy 'n bietjie meer, sal jy graag 'n bietjie</p> | <p>o <b>Numeracy ring</b></p> <p><i>The teacher showed the learners a flash card and then asked them which number symbol was on the flash card. One learner replied that it was a 4. The teacher repeated that it was number 4. The teacher repeated this activity with number 2, number 5, 1, 6, 3. The teacher put the numbers in their chronological and sequential order from 1 to 6.</i></p> <p><i>The teacher clapped a pattern and the learners had to count it. Thereafter, the teacher asked a learner to pick a card with the number reflecting how many claps she made. The learner was uncertain and chose number 1, whereupon the teacher asked the rest of the learners if she gave one clap. They responded by saying no. Another learner took the number 2 symbol. Again the teacher asked if she gave 2 claps and the learners answered no. This activity was repeated with number 4 until one learner picked up the number 3 card.</i></p> <p><i>The teacher repeated the clap of a pattern but this time with 5 claps. Learners volunteered to show the card but only one learner was allowed to show the number 5 card. The activity was repeated with 4 cards but the learner gave a wrong answer namely number card 6.</i></p> <p><i>The teacher handed out a small number card to each learner. The teacher then showed a big number 6 flash card and requested the learners who had the same number on their small cards to join her. A few learners joined her</i></p> |

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|  |   | <p>meer inligting wil hê omtrent data hantering? Van die departement af? Definitief.</p> <p>En measurement ook? Want measurement gaan baie sterk met data hantering nè? Data handling is 'n grafiek wat hulle optrek en measurement is ook meet. So dis 'n ander manier van meting eintlik</p> <p>Wat ek by, soos lank en kort, en dan het ons weer, jy hoef nie net in, hulle moet die basiese, jy kan met jou handspane meet, jy kan met jou voete gebruik om te meet</p> <p>So jy vat dit baie meer konkreet om te meet, dat hulle hul liggaampies gebruik?</p> <p>Ja.</p> <p>Estimation? Dis nie iets wat ek vandag eintlik gesien het uitkom nie?</p> <p>Nee.</p> <p>Is dit iets wat jy baie gereeld maak of is dit ook iets waar jy ook 'n bietjie leiding nodig het?</p> <p>Ek sal sê, ja, skatting, wat doen ons, dit hang af wat my lys sê, E. As my lys sê, estimation, byvoorbeeld, as ek 'n bottel het met doppies in, nou sê ek vir hulle, skat, skat vir my hoeveel, miskien is daar 12 doppies in, dan kry ek elkeen en aan die einde van die dag tel ons dit uit</p> <p>Ons kry, wie het reggeraai, en wie was nie reg nie. En dan bring ons woordeskat in. Die groep wat reggeraai het is minder as die groep wat nie reggeraai het nie</p> <p>Dan bring ons daardie konsepte ook sommer in</p> | <p>and answered that they were having number 6 to her question: "Watter getal het julle in julle hande?"</p> <p>This activity was repeated with the number symbol 5, 3, 4, 1, 2,</p> <p>The teacher then put one by one, a little holder on the floor and requested learners to put the number that she called out, in that specific holder, from 1 to 6.</p> <p>The teacher requested a learner to take 3 counters and to place it in holder number 3. The activity was repeated with 6 counters, but the learner placed it in holder number 5. The teacher immediately corrected it and asked the learner to redo the action and place the counters in the number 6 holder. The activity was repeated with 5 counters, 4 counters, 2 counters,. The teacher gave the instruction regarding the 2 counters in isiXhosa to the learner but the learner still placed it in the wrong holder. The rest of the learners immediately expressed their concern by pointing out that it was in the wrong holder and the teacher asked a learner to place it in the correct order.</p> <p>The teacher then issued cards with dots on it to specific learners who had to match the dotted card with the holder with the number of counters in it, corresponding with the number of dots on the cards.</p> |
| <p>Teacher-Centred</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>The teacher initiated, instructed and controlled all the movement activities. The learners' roles were limited to obeying instructions. No discussion took place or explanation of how the "There's a fire on the mountain" game worked. No problem-solving and/or creative and thinking skills were enhanced. The learners enjoyed the activities but did not have any deeper understanding of the movement activities. For the learners it was</p> | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding the theme discussion activity.</p>   | <ul style="list-style-type: none"> <li>• <b>Movement Activities [outside]</b> <ul style="list-style-type: none"> <li>○ <b>Crawling activity</b></li> </ul> </li> </ul> <p>The teacher demonstrated and instructed the learners to crawl on their hands and feet</p> <p>Learners crawled with their legs straightened.</p> <p>The teacher wanted to know, whom of the learners could walk with</p>  |

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| <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills.</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding</p> | <p>merely fun and movement activities for the sake of having movement activities.</p> <p>The learners crawled merely for the sake of crawling. They did not know why they had to do it.</p> <p>The learners merely obeyed the teacher's instruction.</p> <p>The teacher did not notice a learner who struggled to roll forward. The teacher also did not demonstrate to the learners how it should be done</p> <p>The learners did not understand that they had to group themselves in the number the teacher called out e.g. in two's, in fours, in ones, in fives,</p> | <p><i>their stomachs facing the sky, whilst they walked on their hands and feet.</i></p> <p><i>A few learners succeeded in walking backwards with their stomachs facing the sky.</i></p> <ul style="list-style-type: none"> <li>○ <b>Hopping activity</b><br/><i>The teacher instructed the learners to sit on their knees, whilst they hop around in this position</i></li> <li>○ <b>Rolling forward and sideways activity</b><br/><i>Learners were instructed to roll on the grass forward and not to lie and roll..</i><br/><i>The teacher instructed the learners to lie and roll sideways</i></li> <li>○ <b>Touch your head with your feet in a lying position on your back</b><br/><i>Learners were instructed to lie on their backs and to place their legs behind their heads.</i></li> <li>○ <b>Bicycle riding</b><br/><i>Learners lie on their backs with their legs in the air, making bicycle peddle movements</i></li> <li>○ <b>Obstacle course</b><br/><i>Some learners were instructed to participate at the obstacle course</i></li> <li>○ <b>Walking with stilts</b><br/><i>A group of learners walked on stilts</i></li> <li>○ <b>Throwing bean-bags into buckets</b><br/><i>The teacher instructed specific learners to throw beanbags into buckets.</i></li> <li>○ <b>Hitting balls with sticks</b><br/><i>Learners hit balls with sticks</i></li> <li>○ <b>Twisting with hoops</b><br/><i>Some learners twisted with hoops around their bodies</i></li> </ul> <p><i>After a while the teacher rotated the groups amongst the various activities</i></p> <ul style="list-style-type: none"> <li>○ <b>There's a fire on the mountain</b><br/><i>The teacher organized the</i></li> </ul> |
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| remedial skills.   |  |  | <p>learners to stand in a circle and acted out the actions of the song: "There's a fire on the mountain, run, run, run."</p>  |
| <p>Teacher-Centred</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> | <p>The teacher dramatized the story whilst she told the story. The learners had to listen to the story. The teacher did not make use of any aids or apparatus. The teacher made use of code switching from Afrikaans to English to isiXhosa to ensure that all the learners understood the story. Whilst the teacher told the story she asked closed questions and sometimes, even answered her own questions before the learners could answer it.</p> | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding the theme discussion activity.</p> | <p>• <b>Story ring</b></p> <p>The teacher and the learners dramatized counting and literacy rhymes, previously learnt. The teacher asked the learners questions about a story previously told and they had to use their memory skills to give the answers.</p> <p>The learners listened as the teacher told a story</p> <p>The teacher asked the learners questions in isiXhosa and the learners responded in their mother tongue</p> |

## ANNEXURE X

**SILENT THEMES IDENTIFIED FROM EXTRACTS FROM A TRANSCRIPTION OF AN INDIVIDUAL INTERVIEW [PARTICIPANT 10] COMPARED WITH A TRANSCRIPT OF AN AUDIO VIDEO TAPE OF CLASSROOM ACTIVITIES OF PARTICIPANT 10**

| Silent Themes   | Motivation for a “Silent Theme” being identified [inconsistencies and paradoxes, which occurred between the teachers’ beliefs, feelings, knowledge and experiences in their classroom activities].   | Extracts from transcription of individual interview regarding the teacher’s beliefs, feelings, knowledge and perceptions               | <i>Transcription of audio video tape of classroom activities</i>  |
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| Lack of implementing planning in the classroom  | The teacher did not follow the daily programme as displayed on her walls. Some items were skipped.   | The participant did not share any beliefs, feelings, knowledge and perceptions regarding the free play, tidy-up and toilet activities. | <p><b><i>Daily Programme</i></b></p> <ul style="list-style-type: none"> <li>• <i>Free-play, tidy-up and toilet</i></li> </ul> <p>No activities were set out for the learners and they occupied themselves with the posters and a stencil and a pen and a few papers.</p> <p><i>When all the learners arrived, the learners stood in a row and went to the toilets, whilst singing a number greeting song.</i></p>   |
| <p>Teacher-Centred</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills.</p> | The movement activity was being dominated by the teacher whereby she directed, controlled and initiated all the actions. No learner asked any questions or showed any creative initiative, except one learner who wanted to show how to do a push-up. Learners did not count themselves. No problem-solving questions regarding movement were posed and thus no creative thinking skills were engaged. The teacher was in need of training, in how to introduce an activity and how to close an activity – it felt as if the teacher just started issuing instructions! With no introduction to activities, the teacher proceeded to demonstrate to the learners how to do scissor jumps and instructed the learners to do it with her. The learners participated but some learners experienced large motor co-ordination and mid-line crossing problems, which the teacher ignored. She issued out commands for running, push-ups and “There’s a fire on the mountain, run, run, run”. There was no introduction of why these actions were to be done or what their | You’ve got there, I think movement is very important.  | <p><b><i>Movement Activities</i></b></p> <p><i>The teacher called out a number and the learner then had to run around the play area.</i></p> <p><i>The teacher demonstrated to the learners how to do scissor jumps and instructed to do it with her, whilst she counted how many times they jumped. After the jumping the learners had to do push-ups, which she counted. A learner volunteered to demonstrate how a push-up was to be done, whilst the teacher counted 10 push-ups.</i></p> <p><i>The teacher and the learners participated in a game called “There’s a fire on the mountain” where they had to walk at first and then run, and then eventually grouped themselves according to a number.</i></p> |

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| Lack of developmentally appropriate practices   | connection was. Confusion was experienced by the learners with the "Fire on the mountain" game, as they were not able to group themselves according to the number called by the teacher. This meant that the teacher had to run around and organized them physically in groups.   |   |   |
| <p>The teacher herself being a barrier due to lack of know-ledge and skills, especially remedial skills.</p> <p>Teacher-Centred</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of developmentally appropriate practices</p> | <p>The teacher was standing away from the learners, behind a desk when she gave the instruction that the learners were to position themselves in a boy/girl pattern. Even when she checked it, she was not with the group, but standing apart from them. When she realized that a pattern was not forthcoming, she instructed the specific child where to sit in order to have a pattern. This opportunity could be used as a problem-solving and thinking skills activity. However the teacher identified the problem and addressed it herself – thus very much teacher-centred and teacher-controlled</p> <p>Limited problem-solving occurred when the learners voted for legs or feet. The teacher did not explain to them what minority meant. When a learner said he hated this song, the teacher just ignored it – a chance for problem-solving and creative thinking skills forfeited. Although the teacher said to the learners that the song was a pattern, she did not make sure that they understood what the pattern was, it was just a saying.</p> <p>Although the teacher asked the learners what primary colours were, the group shouted the answer; she did not unpack this concept in-depth or ensured that all learners understood what was meant by primary colours. Although the learners were allowed to choose a coloured ball, they were allowed to choose only one. If they took more, they were scolded and had to give one back [ignoring of individuality and choice?]. The grouping according to colour was controlled and managed by the teacher – the learners merely obeyed the instruction. The counting activity as well as the activity of finding out whether all the colours were equal, were controlled by the teacher. Only the teacher manipulated the balls when they counted it.</p> | <p>So you feel you cover all the mathematic assessment standards in the year? Yeah, I mean, you try to. But I do realise that at somehow, you repeat a lot, but I think that is also reinforcing I've noticed today that you have done counting. You spent a lot of time on counting Yes.</p> <p>and patterns, and with the counting and patterns you also had breaking up and building of little sums. Do you make use of any problem-solving, where you ask the learners to give you, for example, you said to them, you had, I think it was eight smarties. You ate up all eight, how many are there left? They had to show you the 0 on the little card. But do you let them, do you ever give them chances to make up their own stories? No.</p> <p>I think it is, yeah, I don't know whether, you mean to give them an opportunity to think and reason? I mean, I could do, I wouldn't have a problem doing it. I just need</p> <p>Do you need some guidance in how to assist learners in, what is the word, how to develop their thinking and reasoning skills, their problem-solving skills? Yes.</p> <p>But if you think about today's programme, how many times do you feel did you have really learner involvement? Or learner-centredness?</p> <p>Jaa...I thought with the candles they have to think how old they are., you know. That I thought was</p> | <p><b>Numeracy Concepts &amp; Creative Activities</b></p> <p>The learners had to sit on the carpet and positioned themselves in a boy-girl pattern</p> <p><i>The teacher stood behind her desk and issued the instruction that there should be a girl between two boys which she called by name. After ensuring that the learners were sitting in a boy/girl pattern, the teacher instructed the learners to stand up and make a pattern with their bodies by touching their heads, tummies and legs. The teacher then asked the learners what would they prefer, legs or feet and they had to show by hands. She then counted how many and the majority, feet won.</i></p> <p><i>Thereafter she and the children sang the song Head Shoulders, Knees and toes and demonstrated the actions.</i></p> <p><i>The teacher sent a bag of balls around and each child had to take a colour. The learners had to group themselves according to the coloured balls they were having. The teacher proceeded to build a pattern with the coloured balls, yellow, red, blue. . A learner from each group had to place his/her colour in the pattern. The teacher called the learner from the next group to come and place his/her ball in the pattern. The teacher asked the learners if the red and yellows were equal and they answered: " yes". She then asked them how many blue balls there were and she counted it herself,</i></p> |

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| <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> | <p>Limited discussion took place when the teacher asked the learner how old they were, how old were they before and how old were they going to be.</p> <p>Although the learners were told they could decorate the cake in any way, they were limited with the material available [stickers and candle pictures]. The learners were not giving the opportunity to draw their own birthday cakes but had to decorate the work sheet cake. The teacher guided the learners to use yellow if they want a banana cake and red for a strawberry cake. Thus, choosing of colours were also limited.</p> <p>One learner took the initiative to order his number cards from 1 to 10. The teacher ignored this creative and thinking initiative. The teacher did not guide learners to come to an answer by asking guiding questions. The teacher did the actions on behalf of the learner with the learner merely looking on. The teacher gave instructions and learners responded.</p> <p>Although problems were posed and learners had to solve it, no in-depth discussion took place, explaining how to get to the answer. The teacher did not guide the learners to put their number cards in a linear chronological order that would assist them with their answer.</p> <p>Feeling bag with 2-D shapes &amp; 3-D objects – the teacher did not discuss the difference. The learners reacted on her instructions.. The teacher asked closed questions i.e. how many triangles?</p> <p>One learner decided to draw his own candles instead of using the cut out ones and pasted it then onto the cake. One learner was bored with the activity.</p> | <p>a learner-centred activity?<br/>Ja. They decorate their cake as they wish. I put out materials, but also with the candles, obviously I helped the little ones, but the older ones, counted themselves. They must, ja, so they can see I am four, I do need four candles on my cake.</p> <p>What the group said under <i>Content</i>, we said it was, it had to do with <i>colours, doubling, halving, constructing, numbers, counting, sequencing, shapes, data handling, mathematics, mass, concrete apparatus, patterns, estimation, halving, sorting, more/less/equal, balancing, measurement, collecting, foundation for later abstract thoughts and realizing, think and reason.</i> Would you like to add anything else to this content or are you happy with this? What the group said.<br/>There's a lot of this integrated in my</p> <p>... do you've got any learners in your class whom you feel are having remedial problems?<br/>Yes, definitely.<br/>I know with the language thing<br/>Okay, that's two learners that got, that are taught in English as their second language. And the one only came, you said to me, three months ago? Beginning of this term?<br/>Yeah, it's been a [unclear] to see, I don't even have to assess him, it's just to let the English get going. So I am not too concerned, because I know they still got to build their understanding. But I am happy with my Grade R's, Are you finding with the Grade R's, are there learners that, when they make a number, they turn it around? For instance, like this one, this is a 5?<br/>He was the little [unclear]</p> | <p><i>with a few learners who wanted to do so, one by one. They agreed that there was 7 and that the teacher confirmed that the blue, red and yellow balls were equal. The teacher then invited a girl to count the balls whilst the teacher pointed to it.</i></p> <p><i>The teacher placed the coloured balls into 3 rows and requested individual learners to count a specific colour by touching it one by one whilst counting. When a learner counted 8 she asked him if he was sure and then put another yellow ball to the blue row to show that is 8.</i></p> <p><i>The teacher asked the learners how old they were, how old they were going to be and how old they were before and how old they wanted to be.</i></p> <p><i>The teacher showed a picture of a cake with candles decorated on top of it. All the younger children sat at tables and decorated their cake pictures with the assistance of a helper. No other creative activities were put out.</i></p> <p><i>The 4 Grade R children sat on the carpet and started spontaneously building objects with counters.</i></p> <p><i>The teacher demonstrated how a word sum can be demonstrated with the counters and gave an answer by making use of the number cards and showing it on top of their heads, so that their friends couldn't copy their answers. The teacher gave plus, minus story sums.</i></p> <p><i>When a learner battled, the teacher took the apparatus and demonstrated to the learner how to come to the answer</i></p> <p><i>The teacher asked mental maths questions i.e. what</i></p> |
| <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p>  | <p>ONLY 15 minutes were spent on free-choice educational toys activity.</p> <p>There was no link to the theme in all the numeracy and creative activities.</p>  | <p>NO block play, fantasy play or reading with books occurred during this time</p>  |  |
| <p>Lack of implementing planning in the classroom</p>  |   |   |  |

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|  |   | <p>one. I don't know if you noticed. He is okay, but he is also reversing<br/>I'm just, everytime correct them and moulding<br/>Ja, and give them pegboards and they can do a 4 on the pegboard. I've got a nice number puzzle, and in sand. Yeah, 'cause I mean I don't want to be too, because immediately they kind of withdraw. So all the time emphasising, just practising. They all seem to have a finger<br/>How many times a week do you use workbooks or worksheets? Every day?<br/>Yeah, about three times a week.</p> <p>I don't want to label any as hyperactive, it could just be a listening skill.<br/>That they have a concentration problem sometimes?<br/>Yes. You know, you don't want to label anyone as being hyperactive but there are definitely, three or four, that cannot [stibble? Unclear]. And it's is not that we sit too long. We have a break or we jump up and down. I am just finding that they<br/>Fluctuating. And they are not taking ... I've got to repeat instructions.</p> <p>... each child learns at their own pace, ...</p> | <p>comes before 10?</p> <p><i>Once the learners finished their math session, they were instructed to execute the following perceptual and space instructions:</i></p> <ul style="list-style-type: none"> <li>• Click your fingers,</li> <li>• Roly Poly Up Up, Down, Pull, push</li> <li>• Brain-gym activity [tickling your sides on your head]</li> <li>• Breath in and out</li> </ul> <p><i>The teacher showed the learners a poster with shapes on it. She gave them each a bag and told them they were not allowed to look in the bag. The child had to feel the object she was requesting and placed it on the sheet. When a learner gave the teacher a 3-D object, the learner was told to exchange it with a circle shape.</i></p> <p><i>The learners counted the shapes on the board.</i></p> <p><i>The learners had to match their 3-D shape with the 2-Shapes</i></p> <p><i>The Grade R learners engaged with decorating their cakes.</i></p> <p><i>Learners played with dominoes.</i></p> <p><i>Some learners built puzzles</i></p> <p><i>A learner built with counters</i></p> <p><i>A learner match shapes with sorter bucket</i></p> |
| <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of open-ended questions which made an appeal to learners'</p> | <p>Most of the learners played outside, with a few hanging around in the class. The teacher came late out to observe the learners playing outside. She did not make any comments or guide the learners in the play or verbalized numeracy concepts that learners encounter in their play.</p> | <p>Does that mean they learn through play?<br/>Yes, they learn through play. But I have noticed, now that the school is out, your learners are playing in the fantasy corner. Do they play during the day in your fantasy corner? Or are you more fixed on the programme?</p>  | <p><b>Free-play inside &amp; outside</b><br/><i>Learners played outside on the swings, running around with brmmbrmms, wheel barrows, jungle gym and in the sandpit. One learner brought his own fantasy mask</i></p>  |

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| <p>creativity, thinking, reasoning and problem-solving skills</p>   |  | <p>Ja, it depends on who finishes the activity. I had some slow workers. And mainly, the fantasy corner is sort of the last hour of the day. They can play in it during break</p> <p>They can choose, but I do agree I rarely play</p> <p>Ja. I might do, like puppet shows or that type of thing for literacy. Or dress up if they are going to do a little skit for me. But I agree, not everyday.</p> <p>Ja, they also do play every day. Once I have done the activities, they normally can choose to do a puzzle or a game or the blocks. But what I would like to do as well, is actually to make construction and they have to try and copy it, or like when we did homes as out theme. So we do use blocks actually a lot. So I would say, normally every day,</p> <p>Normally everyday, for the last fifteen minutes of the creative activities, about?</p> <p>Ja. They basically, they know they have to do a puzzle some time during the day. Okay, so whether they do it after the activities, if they have done it and there is still time, they go to the blocks. I normally prefer that they do an educational game or a puzzle first, and then they go to the blocks, ja. Unless it is block, unless I do a theme and they got to copy a design</p> |  |
| <p>Teacher-Centred</p> <p>Lack of implementing planning in the classroom</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skill.</p> <p>Lack of open-ended questions which made an</p> | <p>No theme discussion took place but a discussion on people who can help, did take place. No display table was set out or any picture shown.</p> <p>Numeracy concepts were included in the riddle i.e. short, thin. Thinking and listening skills were being enhanced with the riddles. If the learners battled, the teacher gave them hints. However, for learners who experience learning barriers, the teacher could have shown physical examples like a match stick.</p> <p>Although the teacher asked the learners a problem-solving question,</p> | <p>... how do you feel about content? Do you know what content you must teach?</p> <p>I feel pretty confident about it.</p> <p>Where do you get the content?</p> <p>You mean all the ideas, the themes?</p> <p>From our LO's and your planning.</p> <p>I got quite a nice, sort of abbreviated version when I went to that course. Otherwise in the ACE book they've got</p> <p>Okay, and your themes?</p> <p>Where do you get that</p>   | <p><b>Theme Discussion</b></p> <p><i>The teacher asked the learners to tell her which people can help one, and the learners responded with naming them i.e. plumber, teacher etc.</i></p> <p><i>The teacher asked the learners to answer the riddles.</i></p> <p><i>The teacher asked a question regarding fire and the learners responded to it. She posed a problem-solving question by asking learners what were they going to do if there was a fire in the classroom?</i></p> |

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| <p>appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of developmentally appropriate practices</p>  | <p>she did not really took their answers into account. She focused rather on her answer and then told the learners what to do if there was a fire.</p> <p>After a while the teacher took a matchstick and lit the candle. One learner realized that the class was not dark enough [identifying a problem] and spontaneously raised the blinds in the windows [problem-solving] to have a darker classroom. The teacher did not notice this gesture or problem-solving opportunity. No further in-depth discussion was coming forth based on the burning candle – unclear what the reason was for this action.</p> <p>The teacher demonstrated the miming actions, and then managed the learners in miming or copying her miming actions. No individual creativity was encouraged.</p> <p>The teacher didn't show any pictures or 3-D apparatus whilst reading the story. The story also didn't have an end, as the story was to be continued the next day. Some children asked her to read the whole story but she ignored this request. No questions were asked as stated previously she was going to do.</p> | <p>from? Also from the book? Yes, but I;d like to link the themes. Especially if they are going to be in the class for three years, it is nice to do something different. Because they are clever, they will say, ah, but last year we went to the traffic department or wherever, so I try to link up different themes. I think just to expose them to as much as possible. Everything, I don't think they are too young to be exposed to learning about volcanoes,. Their minds are like sponges now, so, everything, all around us, whatever we are expose to, I'll try to</p> <p>The only decision-making that you had with the learners, were when you gave them the choice was with your theme discussion, where they could choose who is going to be a fireman and who is going to be the reporter of the fire?<br/>Yes.</p> | <p><i>The teacher lit a candle with a matchstick. One child commented on the candle.</i></p> <p><i>With the teacher's guidance, the learners mimed how to call a fireman.</i></p> <p><i>The teacher read a story from a book and the learners had to listen in order to answer questions.</i></p> <p><i>The teacher requested the learners to find a space and to hop like a rabbit, or pretended that they were tortoises.</i></p> |
| <p>Lack of developmentally appropriate practices</p> <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>The teacher herself being a barrier due to lack of know-ledge and skills, especially regarding remedial skills.</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>No individual creative movements were encouraged and all the learners did the same movements as the teacher. No discussion of the music or the movement took place. The only action that took place was to dance and listen to the music. No music concepts were re-inforced or focused on. The teacher stood divorced from the learners, behind her desk, when the last song was played. The activities were done purely for the sake of having something to do under the music activities.</p>  | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding the music activities.</p>   | <p><b>Music Activities</b><br/><i>The learners followed the teacher's dancing actions whilst listening to tape music. Five songs were played</i></p>  |

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| <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Teacher-Centred</p> <p>The teacher herself being a barrier due to lack of know-ledge and skills, especially regarding remedial skill.</p> | <p>The teacher failed to capitalize/or notice on spontaneous problem-solving situation: one beanbag was caught in the tree and the learners wanted to solve the problem - one boy started to throw his beanbag to it and the other learners followed his example, until the beanbag fell down. No discussion was done on who threw the furthest, shortest, highest.</p> <p>The teacher directed and controlled the activity by telling which group to come an participate. No attention was given to learners who experienced gross motor co-ordination problems with the ropes. Numeracy concepts likes fast, slow, first, last, second, third were not discussed.</p>                              | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding the outside movement activities.</p> | <p><b>Outside movement</b> – practicing for the sportsday</p> <p><i>Learners played spontaneously with the beanbags. When a beanbag was stuck in a tree, one learner threw his beanbag at it and the others followed his example.</i></p> <p><i>The learners threw beanbags over a distance.</i></p> <p><i>Learners run/skip with ropes</i></p> <p><i>Learners ran races</i></p> |
| <p>Teacher-Centred</p> <p>Lack of developmentally appropriate practices</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skill.</p>   | <p>The teacher rolled and formed the <i>d</i> with clay whilst learners looked. Some of the learners could not see her clearly. The teacher did not verbalise how she formed or made the <i>d</i>.</p> <p>The teacher herself was creating a learning barrier, because when she showed her right hand to the learners, some learners copied her and showed their left hands.</p> <p>The teacher didn't show any pictures or 3-D apparatus whilst reading the story. The story didn't have an end, as the story was to be continued the next day. Some children asked her to read the whole story but she ignored this request. No questions were asked as stated previously she was going to do.</p> | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding the story-time activities.</p>       | <p><b>Story – time</b></p> <p><i>Learners sat on chairs whilst the teacher asked them what words/names/ animals begin with a d.</i></p> <p><i>The teacher introduced the d that was going to be taught the following day.</i></p> <p><i>The teacher read a story from a book. She asked the learners to show their right hands and corrected them</i></p>                        |

## ANNEXURE Y

**SILENT THEMES IDENTIFIED FROM EXTRACTS FROM A TRANSCRIPTION OF AN INDIVIDUAL INTERVIEW [PARTICIPANT 11] COMPARED WITH A TRANSCRIPTION OF AN AUDIO VIDEO TAPE OF CLASSROOM ACTIVITIES OF PARTICIPANT 11**

| Silent Themes                                      | Motivation for a "Silent Theme" being identified [inconsistencies and paradoxes, which occurred between the teachers' beliefs, feelings, knowledge and experiences in their classroom activities].  | Extracts from transcription of individual interview regarding the teacher's beliefs, feelings, knowledge and perceptions   | <i>Transcription of audio video tape of classroom activities</i>   |
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| No silent theme was identified with this activity. | <p>The classroom was set up and prepared. No discipline problems were experienced as the learners were familiar with the class rules and the routine of the daily programme. Learners for example knew that they have to complete a maths/reading game before they could engage with free play activities</p> <p>The teacher alternated active and calm activities as well as her voice tone.</p> | <p>You know, E, I just believe that if, as a pre-school teacher, you have to get to be, to keep a step ahead. Because if you are not a step ahead, then there is discipline problems. And if you are having discipline problems you've are going to have behavior problems. But you've got to be a step ahead. You cannot [unclear]. You must come in the morning, knowing exactly what you are going to do. Know what your plans are for today? What are you going to do and how are you going to do it? But in that, make way and make time [unclear] because the educational situation happens only once. You can't go back to that. And that's why you've got to be organized.</p> <p>[showing vision poster] What the child will know, think and feel, depend on you. You are the one that will choose the experiences he will learn from. What you do not offer, a child will not know. Now, that is our teachers' motto.</p> <p>I try to be on the cutting edge all the time.<br/>I would say my major driver in my class is the child.</p> | <p><b>Classroom Management &amp; Organization:</b><br/>The classroom was colourful. Learners' creative art work was displayed on the walls. A calendar and a Values chart were displayed on the walls. The Classroom is colourful and print-rich.</p> <p>An exploration and investigating life science's corner was set up for learners to experiment and to discover. During the free choice creative ring, classical background music was being played. The classroom was numerate rich with posters and counting number flashcards exhibit very prominently in front of the class. A lot of the numeracy education equipment were home-made e.g. the domino cards. The outside play area was well developed and provided a variety of free choice play activities</p> |
| No silent theme was identified with this activity. | The teacher made provision on a daily basis for a fine motor activity, for example the screws and bolts   | With your creative activities today, the focus was on mind-map. Tell me  | <b>Daily Programme [Wednesday] Puzzles/Games/Crea-</b>   |

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|   | <p>table</p> <p>The content of the daily programme differed each day of the week. The teacher introduced a daily programme that was consistent with the Open Learning Programme in the USA which focused on gifted learners. The teacher believed that every child in her class might be gifted therefore learners also engaged with puzzles on their arrival as they were still fresh.</p> <p>The teacher laid the foundations of learning by introducing mind-maps to the learners. Whilst the discussion of a theme commenced the teacher guided the learners in drawing their own mind-maps about the theme, in order for them to bring their abstract thoughts onto paper and to organize their thinking skills.</p> <p>Each day the learners had to play a maths game after they had completed their free choice art activities. Once again, they chose what numeracy game they wanted to play with or which puzzle they wanted to build.</p> <p>A learner who built a pattern with the pegs and pegboard was guided by the teacher to identify the shape of a triangle</p> | <p>what is the aim of the mind-map?</p> <p>The mind-map, what I've learnt over the years are that the children are not taught how to learn when they get to formal school. And so what I thought, what I am hoping, that this will be, this is the objective, how are we going to know that this is a picture about the farm? So the children came up with the idea, let's put a scarecrow, we don't get a scarecrow in town. So, therefore we get a scarecrow on the left of the page. Right, let's talk about Spring on the farm, where can we see spring? The told, they came up with the idea of all the animals, the hen house, the vegetable patch, the farm pond. That linked up with the week before when we spoke about frogs in spring. And we spoke about the orchard, and blossoms and having the arbour day. So that link with arbour day and we made blossoms on our tree. So everything that is linked, came from them. And then I ask the why, the where, what, how, those questions and then they got to take their posters home and they teach their parents about it. So we actually worked for two weeks on that poster. It is an on-going thing, that we are working on. It teaches them how to think?</p> <p>Anybody can teach a parrot to talk. Anybody but you've got to think</p> | <p><b>five Activities/Free Play</b></p> <p>Learners were busy with creative activities. They chose freely to be engaged at any table.</p> <p>Some learners were building puzzles, with the teacher and an assistant assisting and guiding them in completing their puzzles.</p> <p>After the learners painted they placed their paintings on a dry rack.</p> <p>Some learners refined their fine motor skills as well as enhancing their own individual creativity with the collage activities.</p> <p>At another table learners were moulding dough with various material to create a final product.</p> <p>Some learners enjoyed exploring and building with the screws and bolts.</p> <p>Learners rotated amongst the various creative art tables freely.</p> <p>At one table, a learner was completing a worksheet. The teacher assisted the learner in having the correct grip on the crayon.</p> <p>One learner worked on her mind-map about the theme Spring.</p> <p>Learners engaged with numeracy games once they finished their creative art activities.</p> <p>One learner built his own diamond pattern with patterned blocks</p> |
| <p>No silent theme was identified with this activity.</p> |   | <p>I tell you what, we have found that, especially in the last two years we are changing our approach in that, we used to be bound by a lot of the content that came out of books that have been already written for Grade R through the ACE project and many of the others. And what we</p>   | <p>• <b>Morning Ring/Number Games</b></p> <p>Learners sat in a circle formation on the carpet and sang a greeting song. The teacher sat between the learners and participated in the clapping and singing of the greeting song.</p> <p>The teacher then invited</p>   |

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|  | <p>The teacher used the learners' prior knowledge to re-inforce certain concepts like animal sounds which were discussed previously.</p> <p>The teacher made use of gospel songs to emphasized numeracy spatial concepts and to re-inforce counting numbers.</p> <p>The teacher made subtle use of aids, rhymes and movements, for learners to organize their thoughts and to recall information which was previously learnt.</p> <p>The teacher used the learners' prior knowledge and memorizing skills with the aid of Number Flash Cards to re-kindle their knowledge about biblical principles.</p> <p>The teacher made use of counting songs previously learnt, to re-inforce and to recall counting in two's but also the different animals have different numbers of legs. This prior knowledge was previously discussed at a theme ring.</p> <p>The teacher made use of closed questions to ensure that all the learners understood the concept of equal.</p> | <p>have found, because a lot of the children in my class, had been at H for five years already. That you do not do ME anymore. There are so many of the things they have done and put to bed that I actually got to extend them further. And we have got the knowledge, the prior knowledge, to be able to do so. With the result that I have changed my approach and we have changed the themes of the past, because you know, no longer is the Post Office actually really relevant. No longer is the Bakery actually relevant any more. So now what we have done, we have actually taken the children and we said, what is interesting them? Because they are exposed to so much more than children were exposed to years ago. And also, my group of children basically come from priviledge backgrounds, which make a huge difference of you know, where I get my content from as well as I said that the theme of Spring, we can really enlarge on that. And not just a week on Insects. And a week on Flowers. Things like that, we can really go into depths now. And talk about Life Sciences. Go into it in a much more meaningful way for the children. So my Units of Inquiry are definitely changing. Very, very definitely. And I just belief this must change all the time. It is a very dynamic thing and I must not be bound by that. Often, you know, I do belief that in January you sit down and, we have done it. We've got the themes for the whole year set out but if it comes to something and we feel we can spend more time with, or the children would like to spend more time, we are flexible.</p> <p>We really go more into depth. And they become more Units of Inquiry.</p> | <p>the learners to follow her example and cross their arms and to take their friend's hand to form a cable whereupon the learners sang another greeting song whilst shaking each other's hand. Another greeting song was sung with the learners dramatizing the song. The learners were then requested to put their tongues behind their teeth and sang the song by "sssing" it. This song was further built out by the teacher asking the learners what sounds did certain farm animals make and then used that sound to sing the song.</p> <p>The teacher requested the learners to stand and they followed her example by singing gospel songs. The teacher lit a candle and the learners and she said a prayer. Another gospel song was sung which was followed by a story about a firefly. The learners participated in the chorus of the story by repeating the prayer that the firefly said. The story was concluded with a gospel song.</p> <p>The teacher guided the learners in saying a Bible counting rhyme with the aid of flash cards. At each card the teacher asked the learners what the card was about and learners spontaneously replied. The content of the cards were about Bible stories and principles which were previously discussed with the learners.</p> <p>The teacher used another brain-gym activity of putting the fingers together and then to push the fingers in, as well as using the Tommy Thumb, Peter Pointer rhyme to assist the learners whom they must pray for. The teacher made use of guiding questions to recall the memories of the learners. However, various options were accepted.</p> |
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|  | <p>When a learner experienced difficulties in counting in two's, the teacher assisted her practically by using the child's fingers to guide the child in counting in two's.</p> <p>The thinking skill of estimation was enhanced when the teacher requested the learners to estimate and then to test their estimation by actually doing it, to see if they were correct.</p> | <p>more than just themes.</p> <p>... right from the beginning when you start with the creative activities, right through to the end of the story, the theme is interwoven in all your activities.</p> <p>Absolutely, into everything. All our finger plays, all our songs, our Bible story, our Bible songs, everything has got, even our prayer, has got something in from the theme, so that the children can see it as a whole</p> <p>Well, what we've done is that we've changed the programme from the traditional one. Because we, we were actually forced to change it when the numbers in Grade R, we said they could go 30 to 1, and we just said it is impossible to be able to work meaningful with 30 children to 1. That is an impossibility. What we did then, I went and did quite a bit of research, and visited a lot of schools right throughout the country actually, and we were eclectic in taking the best of everything. I am not for the open classroom where you have different homes for different activities for I just feel that children must have home-based. Especially for your insecure child and we found that more and more children are coming with baggage and insecurity and for them to be moving between different teachers in one day, I am not for that. So I did more research and I changed the two senior classes to an Open Framework Model which is basically for the gifted child. It was developed in America for the gifted child and at H we believe that each child is gifted and that it is up to us to find where that gift lies. And we did that, basically because we felt that it gives us more one on one time</p> | <p>Each child was given his/her own beetle card with counters. The teacher focused on doubling activities. The numeracy game ring was introduced with a counting greeting song, whilst the teacher pointed to each number flash card. The teacher gave instructions for the learners to execute e.g. clear your plates and put your counters on top of your page. The teacher then asked the learners how many legs did the beetle have and they answered six. She then requested them to count out six counters and placed a counter on every leg of the beetle. A song of 2 legs, 4 legs, six legs eight legs were sung. The teacher then asked the learners to look at their beetle patterns and to tell her the story. Although a child then randomly said 2 plus 6 are eight, she acknowledged it, but urged the learners again to look at their beetle and tell her the story of the numbers in front of them. One learner replied 3 plus 3 made 6. The learner was praised. The teacher then wanted to know if one group of the legs were bigger than the other group of if they were equal. The learners answered that it was equal. The teacher then requested the learners to tell her what the concept "equal" meant. One learner replied that it meant the same. The teacher requested the learners to put their two pointer fingers on the bottom legs of the beetle and then to count in two. The learners replied, 2, 4 6, moving their fingers to the counters on top.. The learners were requested to estimate how many counters should be use to cover the beetle's eyes and then to test their answer.</p> <p>The teacher then reques-</p> |
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|  | <p>The teacher enhanced thinking and reasoning skills when she asked the learners if there were more or less counters on the carpet. The “more” concept was practically demonstrated when the learners had to count the counters by touching it one by one [one to one correspondence].</p> <p>Another thinking skill was practiced when the learners had to count in their heads and not verbally.</p> <p>The teacher asked a mental maths question and received immediately a correct answer.</p> <p>To ensure that the learners understood the concept of doubling the teacher repeated this activity a few times with different numbers. The teacher also stretched the learners’ thinking skills by requesting them to have the same amount of counters on the right hand side that is on the left hand side. The teacher rotated amongst the learners to ensure that they were on the correct track. The teacher also introduced halving activities.</p> <p>The teacher asked problem-solving questions whereby the learners had to think to complete a pattern.</p> <p>The teacher had a large variety of numeracy aids that she used to enhance the learners’ numeracy skills. Most of these apparatus were home-made and easy to access i.e. Advertisement pamphlets</p> <p>The teacher compiled a diagram to assist learners to understand the “story of maths”.</p> | <p>with the child, because the children do drop in from quarter past seven to half past seven, which enables me to actually form a relationship immediately with that child in the morning. And the first thing that they do is, they do puzzles or games and it is a non negotiable, they know it is a non-negotiable, they don’t kick it and also the child is fresher in the morning. He is more likely to complete a puzzle. He can focus better and because he is into, formed a relationship with something, there is no separation anxiety because immediately he gets involved with something. And also then they’ve got to take responsibility for their learning where they finished their activity, they bring to the teacher, who will confirm that he has done it and do an assessment on an on-going basis all the time. He then goes to the activities, where three are compulsory and he can manage his time there, as much time he wants to spend there with each one and only once he has completed the compulsory activities, he is allowed to go into free play.</p> <p>Once they have finished their creative activities, they’ve got to do a maths game. They can choose whatever maths game, they can choose or they can even do, by the end of the term, the last two weeks, we say, they can do a reading game as well because a lot of my children now, start to read. It is basically the same thing, they have mastered the maths game, so we know, we don’t just let them trolley on doing the same thing, if they have done it. There must be a certain amount of stimulation, challenge. So once they’ve done it, they take their name, they read</p> | <p>ted the learners to tell her if there were more or less counters on the carpet. The teacher then requested the learners to count how many counters were left on the carpet. When the learners counted verbally, she requested them to count in their heads. After the learners answered that there were eight counters left, the teacher invited a learner to tell her about the story. However, the learners needed guidance and the teacher let them focused on how many counters were on the eyes [2] and then to focus on how many counters were on the carpet [8]. She then guided the learners that <math>2 + 8</math> equals to 10. The teacher requested the learners to show her their left arms and hands. She then requested the learners to put on the left side of their beetle 3 objects. She requested the learners to double 3 and put the objects on the right hand side of the beetle. She asked them a mental maths question: “What’s double 3?” and the learners answered “6”. She then requested them to have 6 counters on the right hand side. The teacher asked the learners to clear their worksheets and place 4 counters on the left hand side. She then requested the learners to put the same amount or equal amount on the right hand side.</p> <p>The learners had to halve the amount of counters on their worksheets.</p> <p>The teacher then made use of the monthly calendar to make a pattern. Following on the pattern the teacher requested the learners to tell her what was the most: the butterflies or the pigs?</p> |
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their name that's hanging up, they take it and post it in the tweetie box, which is that little birdie box, and they can actually go and have [unclear] where I can have a look at the treasure box and choose a little treasure sweet, which is a little sweet with a letter on it. And they've got to show and tell me the letter they have chosen.

And the perceptual value, because if you just say, draw a bee, they say I can't. So, we dicet it, we break it into pieces. And that's how we say, draw a circle, where are we gonna draw it? We draw it in the middle of the page. And then we say, what shape is the wings? What can we, what shape can we, there's no right or wrong, we can use a triangle shape, we can use an oval shape, we can use a hexogen shape or whatever shape you want to use, but how they see it. But it helps them if you break it into pieces and it also help them tomorrow, when we paint it. They can just think, what did we say it looked like?

... I just believe that children have to be, they've got to have this thinking skill because you are living in an instant world where you live. Parents no longer allow their children even to think or choose. It is easier for me just to say this is what you've got to do and this is how you do it. You know, even with my puzzles, I've got, what, twenty-six puzzles, they can choose which puzzle, I am not, you know, saying, you've got to do this puzzle. They know they only built each puzzle twice. And that we pick up from their assessment, they've got to choose something else. And it is exactly the same with all my activities. Everybody gets the same raw materials but it is up to them to

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|  |  | <p>choose and make what they want to make. That is creativity.</p> <p>...were you ever specifically trained on thinking skills?</p> <p>Yes, we were. That was very strong in our, in my training, that you use open-ended questions. And there's no right or wrong. And I think that's what ties up so nicely with the Outcomes-based, I'm actually for it to a certain extent, because I believe that it all teaches children to think. And as soon as you say no, children tend to withdraw. And if they realize that I have value, you know, our main ethos at H is to build a confident child. IQ and all, how clever and if you come first in the class, means nothing to me. But if you are confident, you can take on the world. And that's where confidence comes, you do have value, no matter what you say, it has value. And that's why, using open-ended questions, give the children opportunities not to be scared to actually give, bring their little part forward. And to answer questions. 'Cause as soon as they know it is right or wrong, they are going to be nervous to be wrong and belittled by the rest of the class.</p> <p>... do you feel you cover all the numeracy assessment standards in a year?</p> <p>Yes, I do. Some of them I cover more than once. The more difficult ones, you know we must bear in mind that a lot of these children have already covered those concepts and have already internalized it. So the more difficult ones, at the moment we, this term is halving.</p> <p>Halving and doubling and things like that. So, those will continue because a lot of those children have not internalized them. So we will continue with them.</p> |  |
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|  |  | But ja, definitely, some of them have to be double over, have to go for two terms. Because I work on a termly, where I work out my assessment and my LO's for the term, that these are the ones I am homing in on.   |   |
| No silent theme was identified with this activity. |  | <p>And how long is this free-play approximately?</p> <p>Right, depends on how long the child wants to work at, some children will spend an hour to one hour and half at the creative activities. Others, will rush through it but then there is the teacher-aide, we also have the privilege of having a teacher-aide in each class, which will also keep tabs on them and will say, look, he's rushed the work or bring him back and that is his best work. We do encourage the children to produce their best. It might not be the best in the class but their own personal best. Have they tried their hardest?</p> <p>...The educational games are available all day, every day.</p> | <ul style="list-style-type: none"> <li>• <b>Free-play [2]</b><br/>Learners engaged in free choice play activities which included fantasy play inside and outside, creative activities, sandpit play, climbing and swinging activities, playing with balls and exploring the playground. Some learners discovered earthworms and caterpillars</li> </ul>   |
| Teacher-centred                                    | <p>The teacher integrated numeracy concepts with the music e.g. the singing of a counting song as well as counting the beats of a song. The teacher made use of learners' prior knowledge about the theme and integrated it into her music lesson. Although the music activities were mostly teacher-driven, learners engaged freely in the dances and movements of the music. Learners also contributed by informing the teacher which songs they would like to sing or actions to be made.</p> |  | <ul style="list-style-type: none"> <li>• <b>Music &amp; movement activities</b><br/>The teacher and learners sang and acted out the movements of the song on the beat of the music. The learners then made creative faces according to the instructions on the tape i.e. a scary face. The learners listened to the music story. The teacher asked open questions about the music story and the learners responded with their own answers. The learners were given music instruments and each instrument had to be played 5 times, e.g. the learners who had drums had to beat the drums 5 times, the shakers were shaken 5 times etc and then, on the request of a learner, all the instruments had to be played 5 times. The learners had to listen to the music tape and then</li> </ul> |

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|   |   |   | <p>played their instruments when applicable.<br/>Learners danced freely to the music.<br/>The learners listened to the music story and then dramatized the story, with the different beat and tone of the animals. The teacher acted with the learners.<br/>The teacher discussed with the learners the life cycle of the butterfly and then sang songs about it.<br/>Numeracy counting songs were also incorporated by the learners singing the Butterfly song.<br/>The music activities were concluded with a calming activity whereby the learners lay on their backs and one by one body part was put asleep.</p>   |
| <p>No silent theme was identified with this activity.</p> | <p>Whilst the learners were telling their stories about their objects, they stood near the teacher and she sometimes hugged them as encouragement. The teacher also protected the learner from the other learners when they interrupted his/her story. The teacher asked open as well as guided questions to the learner in order for him to think about what he/she was talking about. However, the teacher focused on building the self-confidence of the speakers.</p> <p>The teacher read to the learners a story about the ladybird, showing them the pictures of the book and discussing the pages with them. She asked open-ended questions i.e. "Who do you think is a ladybird's enemy?" The teacher also asked problem-solving questions as to how a ladybird can protect itself.</p> | <p>A lot of discovery and a lot of children are using our Show and Tell, where they are bringing things from home to do with the theme.</p> <p>Our Units of Inquiry in each class are very important. Because that basically, are from where you work. And you know, the children, their lives evolve around that. You know, and they take that home and it is a huge learning tool. It's a huge learning tool. And I don't believe any school can, any class can function, if you don't have a core. Because that's your core you work around. You know if you just grab a pie in the sky, it does not make any sense for a child. You've got to see the thing in totality, break it apart, bring it back together.</p> <p>Also they had to estimate where was more and where was less in the story, how many do you estimate, how many ladybirds were there?</p> <p>I just want to come back, as you said, you have done a lot of courses as well. Do you feel you are comfortable to deal with these barriers?</p> | <p>• <b>Show and Tell/Story Time</b><br/>Learners chose freely which books they would like to page through and discussed it with their friends.</p> <p>The teacher clapped a pattern and the learners had to listen and repeat the pattern.</p> <p>Learners volunteered to tell their friends about the objects they brought to the classroom.<br/>The teacher asked the learner questions about his object to which the learner responded with his own interpretation.</p> <p>The teacher pointed to sentence strips and the learners read the sentences [these sentences were previously being taught in a story situation].</p> <p>The teacher then read with the learners a poster story with pictures and words in the sentence strips. The learners with the teacher dramatized the poster story about the beetle.</p> <p>The teacher read to the learners a story about the ladybird, showing them the</p> |

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|  |  | <p>Yes, yes, yes.<br/>         And also, a lot of one to one contact is crucial with those children. Not just group work.<br/>         And to make them feel they are accepted.<br/>         Accepted but also to try and remediate. and because I am sitting with them all the time.</p> <p>I think that the biggest thing with a story is, I believe in story time that your major focus is listening. So be careful that there is not too much visual, when your outcome is a listening activity. But you need to keep them there.</p> | <p>pictures of the book and discussing the pages with them. She asked open-ended questions i.e. "Who do you think is a ladybird's enemy?" The teacher also asked problem-solving questions as to how a ladybird can protect itself.</p> <p>The teacher then introduced the story of the day with a book and a three-dimensional object of a ladybird to the learners.</p> <p>In retelling the story, the teacher asked the learners guiding questions about the story.</p> |
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## ANNEXURE Z

**SILENT THEMES IDENTIFIED FROM EXTRACTS FROM A TRANSCRIPTION OF AN INDIVIDUAL INTERVIEW [PARTICIPANT 14] COMPARED WITH A TRANSCRIPTION OF AN AUDIO VIDEO TAPE OF CLASSROOM ACTIVITIES OF PARTICIPANT 14**

| Silent Themes   | Motivation for a “Silent Theme” being identified [inconsistencies and paradoxes, which occurred between the teachers’ beliefs, feelings, knowledge and experiences in their classroom activities].  | Extracts from transcription of individual interview regarding the teacher’s beliefs, feelings, knowledge and perceptions                          | <i>Transcription of audio video tape of classroom activities</i>  |
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| <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p> | <p>The classroom was organized, clean and neat. Creative activities were set out. Although the 24 learners were disciplined, they had a good relationship with the teacher.</p> <p>The role of the assistant was merely to assist in setting out the creative activities and to write the names of the learners on the worksheets.</p> <p>Bags of the learners can be placed neatly in shelves or hang from hooks attached to the walls. Currently, the bags are not only untidy but also create a safety hazard.</p> | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding the management and organization of the classroom.</p> | <p><b><i>Classroom management &amp; organization:</i></b><br/>           The classroom was clean and the creative activities were set out on 4 tables. Pre-painted backgrounds were on the floor. On the board the LO’s were written out. The title of the theme, <b><i>Water</i></b> was written on the board as well as drawings of a rainbow, umbrella tap with the words written beneath it. A small theme table was set out under the black board with a scale, clock, abacus, 1 litre bottle, 1 500 ml bottle, a bucket and spade and counters on it. An educational corner which was well equipped was set out in one corner of the classroom. Numeracy charts depicting body parts, numerical cards weather chart, 100 chart, were displayed on the walls</p> <p>Bags of the learners were lying in a heap in one corner of the classroom.</p> <p>A lovely book corner was displayed in one corner. A Blockplay area occupied some space against a wall. A fantasy area was set up in the corner and on the floor, next to the blockplay area<br/>           Artwork was displayed on the wall.</p> |

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| Teacher-centred   | The greeting ring was formal with both the teacher and learners greeting each other formally. However, a light relief was experienced when the learners sang a greeting to each other and greeted one another with a hand shake. This ring was dominated by the teacher's lead.   | The participant did not share any beliefs, feelings, knowledge and perceptions regarding the greetings activities.  | <ul style="list-style-type: none"> <li>• <i>Morning ring [Greetings]</i><br/>Learners sang a gospel song followed by a greeting song whilst standing in a circle formation. The teacher, who stood also in the circle, greeted the learners in isiXhosa, English and Afrikaans and the learners had to respond.</li> </ul>  |
| <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skill.</p> <p>Lack of developmentally appropriate practices</p> <p>Teacher-Centred</p> <p>Lack of going beyond the minimum requirements of the assessment standards</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> | <p>The teacher did not notice that some learners did not participate in the morning ring activities. Most of the time, the learners sat quietly, not uttering a sound or making any movement which is in contrast with normal children development and behaviour – they responded only when the teacher gave a direct instruction to a specific learner.</p> <p>Some learners recited up to December month but had only ten fingers in the air. There was no intervention from the teacher by showing that up to October ten fingers are being used but with November and December one has to start again with another two fingers, called eleven and twelve. Therefore, the aim of this activity was not really achieved and the learners counted whilst reciting, without real understanding of what they were doing. This activity was dominated by the teacher with little spontaneous interaction by the learners.</p> <p>The weather ring was dominated by the teacher, who asked closed questions and expected a correct answer without any discussion about how the learner got to the answer. Sometimes, some learners just guessed.</p> | <p>Everyday I am doing numeracy because I, in the morning ring, they are counting, they are doing the weather, they are doing the days of the week, they are doing the months of the year. So counting, they are counting there.</p> <p>Learners' involvement, my feeling is, that when you involve them, they become, they're not afraid of the teacher, because they are used to be free. So you give them an opportunity to, maybe in the morning they, sometimes on Mondays, they tell stories about the weekend, so there is it where they become involved. And sometimes, you can also tell maybe this child has got some problem. He was absent and then she came back and then she was going to report, "Teacher I was having flu, and I was going to the clinic" and so now, even if we are doing activities, we involve them in the activities. "Cause now, what I do to involve them, I even teach them how to clean their own classroom, because this classroom, it is the learners who clean it. Because after school, they take the brooms and they sweep everything, they can even sweep the floors. I involve them in each and every activity. Even to set the theme table, I'm using them, so I am going to tell them, okay we are going to learn about something like water.<br/>So you feel involvement is very important?<br/>It is very important.</p> | <ul style="list-style-type: none"> <li>• <i>Morning ring [Weather, Day, Months]</i><br/>Learners sat on the carpet in a circle formation whilst the teacher sat on a table. The teacher asked the learners: "What day is it today?". The learners responded that it was Wednesday. The learners recited the names of the weeks in isiXhosa and English. The teacher then again asked the learners what day it was. The learners answered that it was Wednesday. The teacher requested the learners to show Wednesday with their fingers. The learners showed three fingers. The teacher and the learners repeated this action..</li> </ul> <p>Thereafter the teacher requested the learners to say the months of the year whilst counting each month with their fingers. The teacher then asked the learners in what month they were. Some learners responded by saying it was December. The teacher then wanted to know whether it was true, that they were in December? Some learners responded by saying no, they were in September. The teacher confirmed that it was indeed September. The teacher then requested the learners to count from January to September. The teacher stopped the learners at September and then asked them how many fingers did they have in the air? The learners responded by counting their fingers</p> |

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|  |  | <p>The learner who is not involved, I give him a task to do. Sometimes I am going to ask her to bring the bags of the learners to the learners, when it is snack time. So I involve them, even the one who is shy to talk. So I can say to her, you've got nice thing on, can you tell us about this nice thing. Or maybe, Wena, do you ever go to town and then she is going to respond, "Yes with my mother". So I always give them some things to talk so that they can talk and do. So that at the end of the day, she is involved with the activities.</p>   | <p>from 1 to 9. However, some learners kept on counting to 10. The teacher confirmed that the learners should have had 9 fingers in the air and that September was the 9<sup>th</sup> month. The learners then repeated it by saying September was the 9<sup>th</sup> month.</p> <p>The teacher asked a learner to go outside and observe the weather. Whilst the learner was outside, the teacher and the learners sang a song about the rain. Thereafter the learner had to display the correct weather chart pictures. The learner said that it was cold and showed a picture to this effect to the class.</p>   |
| <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of developmentally appropriate practices</p> | <p>The theme discussion was dominated by the teacher who asked questions and learners answering it. It was as if the learners were guided previously to the correct answers and that they had to memorize it. No in-depth discussion took place and no reference to pictures depicting the usage of water and or three-dimensional apparatus were observed. The rote learning was also evident when learners had to repeat sentences that the teacher uttered.</p> | <p>My daily programme today nè? My focus was in numeracy, and then it was about counting, about shapes, sequence the shapes and then it was also about measurement. A Grade R learner, bona, they learn through playing, that's why I was using the water, because my topic was water for the week.</p> <p>So we were measuring the water with different cups with different sizes. Then even measurement, the importance of measurement today, we were doing water, so that they know you must not waste water. You must use just the amount for that thing, so today I was using different type of sizes. If you need smaller water, you are going to use the smaller one. If you need more water, it's going to be the bigger one nè?</p> <p>So, every morning when they came in, I fetch water, they put water on the table. After I tell them to pour water in the buckets, they become involved.</p> <p>My topic is for two weeks. This is the last week for this topic. I am doing this water.</p> | <p>• <i>Morning ring</i> –<br/><b>THEME [Discussion]</b></p> <p>The teacher asked the learner: "What are you learning about today?". The learners responded that they were learning about water. The teacher then asked the learners what water helps us with? The children responded by saying they drink water. They also answered that they used water for washing, cooking. The teacher then asked the learners how many glasses of water one should drink a day? The learners answered eight glasses of water. The teacher confirmed that a person needed to drink eight glasses of water a day. The learners repeated in parrot-style her words: one should drink eight glasses of water a day.</p> |

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|   |  | <p>Problem-solving, 'cause I was thinking this is where you, I was teaching about water, the importance of water, now the problem-solving is that, how can we solve the problem when the tap, when you've got a leaking tap? And then they said you have to close the tap's [unclear], or the others said, you can take a bucket and put it under the tap so the water can, you pour the water into the bucket. So that is how we solved a problem today about a leaking tap.</p>  |   |
| <p>Teacher-Centred</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>The counting activity was dominated by the teacher, who instructed a learner to bring her the abacus. The teacher controlled the abacus and moved the beads whilst the learners had to count each bead that she moved. There was no interaction with the abacus by the learner and it was not encouraged. No problem-solving questions were asked i.e. what comes after the seventh bead or what was before the fifth bead. The learners counted merely for the sake of counting up to ten. No exploration or experimentation was encouraged whereby some learners could have been invited to go beyond counting ten, whilst they themselves manipulate the abacus</p>  | <p>So my feeling is that, sometimes, the learner is unaware that he or she is learning because now, they were counting by pouring the water. So I thought mathematics, numeracy start from Grade R. But now I was not aware of that and at homes, it is also numeracy. When they are eating, I can ask, how many spoons do you eat with? So the focus was on count. Because we count everyday. Everyday objects, we are counting.</p>  | <ul style="list-style-type: none"> <li>• <i>Morning ring [Counting]</i></li> </ul> <p>The teacher informed the learners they were going to count. A learner was instructed to fetch an abacus, whereby the teacher moved the beads one by one and the learners had to count to 10 in English and then repeated the 1-10 counting in isiXhosa.</p> <p>The learners were instructed to stand up and to jump rhythmically whilst they count from 1 to 10.</p>  |
| <p>Teacher-Centred</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of open ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>The sequencing and building of patterns was dominated by the teacher. The learners sat and watched whilst the teacher packed out a pattern of four shapes, answering the teacher's closed question ["What shape is this?"], "A square", and repeated what the teacher said: "A square". "This is a pattern, what is it?" And the learners answered: "A pattern". When there was confusion regarding a square and a rectangular, the teacher did not let the learners discover themselves what the differences are between the two shapes, by letting them handling it themselves and asking them guiding questions. She merely told them the difference.</p> <p>The learner packed out the pattern whilst the other learners were looking at it. She only packed out a pattern of 4 shapes, green triangle,</p> | <p>And the shapes, it's shapes and colours. The child must be aware of the shapes, be aware of the colour, because colours and shapes are just like counting. It's everyday objects. If the child is watching tv, he can see, oh, this is the shape of something. Or maybe he is at the location, then there passes a red car. It is then still the shape and colour. So I will, that's why I was teaching them shapes and colours. They must grow up with shapes and colours. Identify the cars. And even to do the patterns. Like to today, we do the patterns with shapes and colours, sequencing the shapes. So from Grade R. the child goes up and he has learnt to</p> | <ul style="list-style-type: none"> <li>• <i>Morning ring [Patterns]</i></li> </ul> <p>The teacher asked the learners to tell her what she was holding in her hand. They answered it was a triangle.</p> <p>The teacher gave a child a carton shape [first a circle and then a rectangle] and requested her/him to place it on the carpet. However, when the teacher asked the learners to identify the rectangular shape, they called it a square. The teacher rectified it by saying it was not a square but a rectangular because two side were equal and large and the other two sides were small and thus equal. The teacher told the learners that she was going to make a pattern</p> |

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| <p>Lack of going beyond the minimum requirements of the assessment standards</p> <p>Lack of developmentally appropriate practices</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skill.</p> | <p>yellow circle, yellow square, green square. Although the teacher asked which shape each was, no further creativity or encouragement was uttered by asking the learner to make a pattern with more than 4 beads.</p> <p>The building of a pattern by a second learner was conducted in utter silence, whilst the rest of the group looked what she was doing. Although the learner showed her threaded pattern to the learners in front of her, the learners behind her could not see the pattern. Only one learner was asked to thread a pattern – no active involvement from the other learners.</p> | <p>recognize patterns [something in isiXhosa – unclear], and the child can see that I don't do the other one, I'm unique, he can see the pattern for himself, maybe in the mirror. And that's what numeracy is all about.</p> <p>No, I am not relying on counting. I do all of them. Ja, they must integrate. The child counts, he must know how to measure, that's also counting, or sequencing. So we use all of them but when they do all of them, they do counting always.</p> | <p>with these shapes. The teacher picked up the forms and organized it into a pattern: triangle, circle, rectangular, square. The teacher then told the learners that they were also going to make a pattern, just like she did.</p> <p>The teacher demonstrated with threading shapes and a string that a pattern. She requested a learner to pack out a pattern. The teacher then asked the learners with which shapes did the girl started her pattern? They answered it was a triangle followed by a circle, square and another square. However, one learner said the last square was a circle, but the teacher corrected him by confirming that the last shape is a square. Another learner was requested to build also a pattern. The learner built a pattern of one blue triangle, orange circle, orange square, orange square. Again the teacher asked the learners with what did the boy start his pattern? The learners responded by saying he started with a blue triangle, which was followed by a circle and two squares.</p> <p>The teacher asked a learner to demonstrate that a pattern can also be threaded. The learner threaded an orange square, a green star, a red square and a red <i>Shoek</i>, and a blue star. The learner showed the threaded pattern to the learners. The teacher then asked the learners what colours were being threaded in the patterned necklace. The learners responded that it was blue, orange, red and green.</p> |
| <p>Teacher-Centred</p> <p>Lack of developmentally appropriate practices</p>  | <p>Although the teacher set out beforehand all the creative activities, there was no evidence of any free-choice choosing of which activity to do as well as no individual creative activity – the</p>   | <p>Then if you do creatives, then numeracy is there. So is they paint, what colour is this, is this the blue paint or can, sometimes they mix for themselves. So</p>   | <p>• <b>Creative Activities</b><br/>The teacher instructed the learners to go into their groups to the different creative art tables. At the first creative table</p>   |

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| <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p>             | <p>learner had to complete one worksheet. The teacher acted as a sergeant-major by instructing the various groups to go to a specific table. The learners had to stand behind the able and chairs and waited for the teacher, before they could start with the activity. At the counting of the number line, the number symbols were placed up-side down for one side of the table [left side] whilst the other side saw the numbers in the correct format. This incorrect placing of the number line enhanced learning problems whereby a learner might learn to make numbers incorrectly.</p> | <p>numeracy is always there</p>   | <p><i>the teacher instructed the learners to count from 1 to 10 on the number line. The teacher pointed out to the learners that they were going to count with the counters by placing the counters on the corresponding number. Then they were instructed to colour in the number 3 and it's items on the worksheet.</i></p>  |
| <p>Lack of open ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> | <p>Although the teacher explained to the learners that they had to colour in the fish, cut it out and pasted onto the blue backgrounds, she only asked them closed questions, whereby the learners responded in a one word answer: No learner was individually asked and they all responded as a group, giving the same answer.</p>   | <p>Yes, they carry for two weeks. What I am doing, [something in isiXhosa – unclear] is, today is Wednesday, so I know that Group A was doing [unclear] and counting, so tomorrow they are maybe going to do the fish and the water, so that they are rotating for the whole week. So now, every other week, every child has work at 4 tables</p>   | <p><i>At the next table, the teacher asked the learners what the picture on the worksheet was and they answered that it was a fish. The teacher then asked the learners where fish could be found and they answered in water. The learners had to colour in the fish, cut it out and paste it onto blue backgrounds.</i></p>   |
| <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p>                                       | <p>Just like the previous tables, the learners waited patiently and silently, standing behind their chairs, for the teacher to hand out the worksheets on patterning and to explain to them what should be done. Once she finished explaining, they were allowed to sit and start with the worksheet</p>  | <p>Learner-centredness, is like the activities, you must have various activities, so even this one, must not be embarrass, I can't do this. If you've got various activities, the child can see, "Oh, I am able to do that, so I can do that", that is learner-centred. You don't always give him instructions, you must do this and this and this. Because what I've learnt, I introduce the tables, at this table they are going to do this and this. So, today, this one is going to that table, because it is going to be easy for me, so they choose the tables. They don't always go in their groups. Okay, so they chose this morning where they want to go. Yes, because I explained that, at the tables I've got this and this and this. So when they choose a table, you know they are going to be able to cope with it. So now today, they choose their table. So now, "Mam I want the water and the fish", so they must go there.</p> | <p><i>At the third table the teacher requested the learners to complete the pattern and colour in the shapes. The teacher then again asked the learners what the shape was on the worksheet and the learners responded by saying it was a circle. Looking at the first row, the teacher pointed out to the learners that they must complete the pattern e.g. circle, triangle, circle, triangle.</i></p> |
| <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skill.</p>             | <p>At table 4 the teacher explained to the learners that they must complete the worksheet on measurement. She unpacked the measuring cups in the middle of the table, whilst the learners looked what she was doing, answering her as a group in the same one word answers:</p>   | <p>I do have learners with barriers in my class. The problem is, even these four children, who are always, they don't come regularly to school. Often absent. And then when we are doing a theme, it seems as if it is new to them. They were not there, yabo? Then the other thing, it is</p>  | <p><i>At the fourth table, the teacher put out the measurement cups. She then reminded them of the previous measuring activities with the cups and the water. The teacher then instructed the learners to colour in the pictures on the worksheet depicting whether the holder was full. The teacher reinforced that only the pictures that were showing a full holder must be coloured in.</i></p>      |
|  | <p>No individual creativity was enhanced – most learners coloured in some small pictures on their worksheets. At the pattern worksheet table, the learners did not really understand what they were supposed to do – some learners started in the middle of the page, colouring in a row with shapes, and not working from top to down.</p>   |   | <p><i>The teacher rotated amongst the tables, reminding the learners to colour in nicely. At the table where the learners had to complete</i></p>  |
|  | <p>At the measurement worksheet, a</p>  |   |  |

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| <p>Lack of developmentally appropriate practices</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> | <p>learner turned his page horizontally and coloured in the cup and there after turned his paper back to face vertically – thus learning problems were already beginning to come to the surface and no intervention by the teacher and/or assistant was given in this regard. One learner's worksheet was even coloured in upside down.</p>   | <p>age. My youngest is four years.</p>  | <p><i>the shape pattern worksheet, the teacher reminded the learners to finish the first pattern, circle, triangle.</i></p>   |
| <p>Lack of developmentally appropriate practices</p>  | <p>Although the teacher has given individual instructions at each creative table, the learners seemed at lost at first, as if they were still uncertain what was expected of them regarding the worksheets.</p>   | <p>Because of the background of the house, it affects when you are doing, when you say go and do the activities. Because I've got one child, I won't say to his parents that he's got the gaps nè, but because, of not coming to school each and every day, the background, so they are now in the class, I must struggle. Even now, because he does not use this, he is using that. He is always in the location, so this child is struggling. I don't think it is a barrier because it is sometimes the background.</p>   | <p><i>Once the learners completed their worksheets, they sat on the carpet and played with a few big lego blocks. However, as more learners gave in their worksheets, the space on the carpet as well as the amount of blocks to be shared, became limited.</i></p> |
| <p>Lack of developmentally appropriate practices</p>  | <p>Some learners were still lost. However, one learner placed his worksheet vertically and not horizontally, to complete his worksheet. Every time he coloured in at the worksheet, he turned the paper in the direction he wanted to colour in.</p> <p>One boy's worksheet was up-side down with all the picture standing on their heads – the teacher did not intervene and remediated the situation.</p>   | <p>Do you find that learners, when they make a number 3, they do it upside down? They do it upside down. And sometimes it is a m or a w, you see, they've got that problem in numbers. But they can recognize it. But it is difficult to write it.</p>  |   |
| <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p>   | <p>Most of the activities were done in a hushed silence.</p> <p>Most of the learners at the shape pattern worksheet table, were not able to complete their worksheet correctly. They got confused when they had to repeat the pattern and some of them merely drew circles and triangle for the sake of doing an activity. Some of the learners became restless and looked around at each other, but did not utter a word. One learner did not want his friends to see what he was doing and tried to cover his worksheet with his hands and head.</p> <p>The counting worksheet was not a success as some learners did not colour in the correct number of objects or traced the number 3 symbol.</p> <p>For the first time, learners spontaneously interacted with material and had free discussions with one another when they played with the blocks.</p> | <p>... you are told at the training, but when it comes to the assessment standards, 'cause now the idea was, now a Grade R child does not write, just prepare him to write. And then he is going to write when he is at Grade 1. But now the assessment standards they bound us to that, they have to write. "Cause the assessment standard has got that writing nè? It's drawing, everything. It is now that the problem I recognized is that they must start writing also. Because of the assessment standards.</p> <p>...do you've got enough training to know how to handle, to learn children to write?</p> <p>No, we don't have. It's only when we go to the workshops.</p> |   |
| <p>The teacher herself being a barrier due to lack of knowledge and skills, especially</p>  | <p>Whilst the teacher was busy with the spatial activities, four learners were not participating in this activity because they had to complete their worksheets.</p>  | <p>The participant did not share any beliefs, feelings, knowledge and perceptions regarding the position in space activities.</p>   | <p>• <i>Morning Ring [Position in space] The teacher and the learners said a gospel rhyme, with the teacher</i></p>   |

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| <p>regarding remedial skill.</p>   | <p>However, their attention was not on the worksheet, but on the group participating in the beanbag activity. They were ignored by both the teacher and the assistant.</p>   |  | <p><i>leading and the learners repeating the words. Thereafter the learners said a rhyme about not touching their bodies. The teacher requested the learners to repeat they body rhyme again.</i></p>  |
|  | <p>An incorrect perceptual concept was being introduced to the learners by the teacher. The learner was not standing over the chair but on top of the chair. The teacher did not rectify the problem but reinforced the incorrectness of it by requesting the learners to repeat the learner was standing over the chair instead of on top of the chair.</p>   |  | <p><i>The teacher placed a chair in the middle of the circle, on the carpet. She informed the learners that they were going to show her positions in space. The teacher placed the beanbag on the chair and then asked the learners where the beanbag was.</i></p>   |
| <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p>                                       | <p>Another incorrect perceptual concept was wrongly introduced. The beanbag was never thrown underneath something, instead it went up high before it landed or was caught by the learner, touching their mid-bodies.</p>   |  | <p><i>They answered on top of the seat of the chair. The teacher then asked them what did "phezulu" mean and they responded that it meant "under" in stead of saying "up". The teacher placed the beanbag under the chair and the learners responded by saying it was under the chair. The teacher requested the learners to repeat saying it was under the chair, repeating the word "under".</i></p>   |
| <p>Lack of developmentally appropriate practices</p>   | <p>The "Over" space in position concept was also wrongly introduced. The beanbag was not thrown over something but just into the air and being caught before it landed on the floor.</p>   |  | <p><i>The teacher requested the learners to repeat saying it was under the chair, repeating the word "under". The teacher requested a learner to stand behind the chair. She then asked the learners where he was standing and they answered behind the chair. The teacher then requested another learner to stand on top of the chair, asking the learners where the boy was standing. They replied that he was standing on top of the chair. The teacher proceeded to ask another learner to stand next to the chair, and then asking the learners where this child was standing. They replied that this child was standing next to the chair. The teacher instructed another little girl to sit under the chair. Then she asked the learners where this little girl was sitting and they replied that the girl was sitting under the chair. The teacher repeated an acti-vity where a learned had to stand on</i></p> |
| <p>Lack of open ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> | <p>Although the learners enjoyed throwing and catching the beanbag as an activity, the teacher did not ensure with a follow up activity i.e place the beanbag under your bottoms and through the beanbag underneath the chair, as to whether the learners really understand the concepts of "under" and "over". Again, the teacher dominated the activities by issuing out the instructions and expecting the learners to obey the commands. Opportunities for discussion regarding position in space as well as enhancing problem-solving questions and creative thinking skills, were never being used by the teacher.</p> |  | <p><i>The teacher requested the learners to repeat saying it was under the chair, repeating the word "under". The teacher requested a learner to stand behind the chair. She then asked the learners where he was standing and they answered behind the chair. The teacher then requested another learner to stand on top of the chair, asking the learners where the boy was standing. They replied that he was standing on top of the chair. The teacher proceeded to ask another learner to stand next to the chair, and then asking the learners where this child was standing. They replied that this child was standing next to the chair. The teacher instructed another little girl to sit under the chair. Then she asked the learners where this little girl was sitting and they replied that the girl was sitting under the chair. The teacher repeated an acti-vity where a learned had to stand on</i></p> |
| <p>Teacher-Centred</p>   |  |  |  |

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|   |  | <p>top of the chair, asking the learners where he was standing and having the learners answering that the child was standing over the chair.</p> <p>The teacher repeated the action of requesting a learner to stand behind the chair and having the learners answering her question that the child was standing behind the chair. Another child was requested to stand in front of the chair and the class answered that the learner was standing in front of the chair.</p> <p>The teacher then proceeded to throw a beanbag to a learner from a backswing position [basketball position], saying that the beanbag was coming from an "under" position. The learners then repeated "under". She repeated this action to a few learners, enforcing the concept that the beanbag was thrown from an "under" position".</p> <p>The teacher then wanted to introduce the concept of "over" by demonstrating to the learners that she was throwing the beanbag from an "over" position e.g. she pulled her left arm backwards with the beanbag at the same position as her ear, and then throwing it to a learner (netball throw), saying it was coming from "over". When a learner threw spontaneously the bean-bag back to the teacher (from a basketball throw position) the learner was corrected and had to repeat and followed the teacher's example of "over" position.</p> |
| <p>Teacher-Centred</p> <p>Lack of developmentally appropriate practices</p> <p>The teacher herself being a barrier due to lack of</p> | <p>The movement activities were planned, controlled and executed by the teacher. No spontaneous learner involvement was encouraged; learners had to execute instructions. It seemed as if the learners did not really understand what they were doing, but were going through the motions.</p> | <ul style="list-style-type: none"> <li>• <b>Movement Activities [outside]</b></li> </ul> <p>The teacher introduced a walking at one place and stretching activity whereby she instructed the learners to stretch their legs on the count of 3. This activity was repeated a few times.</p>  |

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| <p>knowledge and skills, especially regarding remedial skills</p> <p>Lack of open ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> | <p>No problem-solving questions were asked nor was there any reference to numeracy concepts.</p> | <p><i>The teacher then gave a boy a home-made shaker and requested him to close his eyes. She then requested the learner to shake the shaker and walked towards the group whilst his eyes were closed. When another learner touched him, he had to stop. This activity was repeated with two other learners.</i></p> <p><i>The teacher changed the activity whereby she shook the shaker and a learner with her eyes closed came to touch her by listening to the sound where the teacher was. The teacher then identified two other learners to repeat this activity.</i></p> <p><i>The teacher proceeded with another movement song game whereby the learners acted out the actions of the song. The teacher gave the instructions : "In the pool/out of the pool" whereby the learners moved forward to be in the pool and backwards to be out of the pool.</i></p> <p><i>The teacher informed the learners that they were going to divide themselves into two teams, namely one team for the boys and one team for the girls. Then a boy and a girl from each team had to race against one another at the outside playground with buckets of water. The learners raced with their buckets, filled it up with water and raced back and emptied it in the container. The learner had to give his/her bucket to the next boy/girl.</i></p> <p><i>The learners stood in a circle formation. The teacher lead the learners in saying and dramatizing a rhyme and when a certain word was said, the teacher chased the learners. Once the teacher caught a learner, she put him in the middle of the</i></p> |
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|   | <p>Confusion – the learners did not understand how to group themselves in a group according to the number which was called out by the teacher.</p>   |  | <p><i>open field and went to catch another learner or seven.</i></p> <p><i>The teacher introduced another activity [There's a fire on the mountain] whereby the learners had to walk in a circle formation and when the teacher changed the rhythm of the song, they had to run and grouped themselves into groups according to the number she was calling out.</i></p> <p><i>The learners stood in a circle in the class and on the teacher's instructions had to execute the actions of leaves in the wind whereby they had to wave with their hands in the air, and then slowly they had to go down and lie on the carpet. The teacher then told the learners that she was going to water the leaves and that the leaves would become green again, whereby the learners then had to sit up again.</i></p>  |
| <p>Teacher-Centred</p> <p>Lack of open ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of developmentally appropriate practices</p> <p>The teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> | <p>The teacher told the learners the story and asked them closed questions. No in-depth discussion of the book took place, except when the teacher asked the learners closed questions and they answered accordingly.</p> <p>Some learners started to get tired and bored by merely having to sit still and listen to the stories.</p> <p>Not all learners could see the pictures as the "reader" story teller was standing in one place, not facing all the learners in the circle formation.</p> <p>The teacher "read" three books, one after another. . However, the learners enjoyed the story telling by their friends, and found it amusing.</p> |  | <p>• <b>Story time</b></p> <p><i>The learners sat in a circle formation. The teacher showed the learners a book about the farm animals and water. She asked them questions about it e.g. what animals were on the cover of the book? The learners repeated in a chorus that it was a cat, a goat and a chicken. The teacher told the story to the learners, whilst showing each picture of every page to them. The learners repeat the sentence that she "read/told" to them.</i></p> <p><i>The teacher introduced a second book [Going to school] to the learners. The learners spontaneously said a rhyme about going to school. The teacher then proceeded telling the learners about the new book.</i></p> <p><i>The teacher introduced a third book about rain. This book was told in English to</i></p> |

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|  |   |  | <p><i>the learners and being translated into isiXhosa when the learners did not understand it. The learners had to repeat some of the English phrases.</i></p> <p><i>The teacher instructed a learner to choose a book and to tell the class about it. The story was about a wedding. The teacher guided the learner by asking questions about the book and requesting the learner to show the pictures to the learners. Once the learner finished telling the wedding story, the learners sang a wedding song. The teacher guided the learners by repeating to sing the song again.</i></p> <p><i>The teacher invited the learners to tell stories to their friends. One boy told his story and was rewarded with a hand clap from his friends. A girl followed by telling her friends about the Jackal and the Wolf. She was also rewarded with a hand clap. Another boy told his story about animals, which was enjoyed by the group. Another girl also told the class a story</i></p> |
| <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p> <p>Teacher herself being a barrier due to a lack of knowledge and skills, especially regarding remedial skills</p> <p>Teacher-centred</p> <p>Lack of implementing planning</p> | <p>No educational toys and/or material were put outside. The learners merely walked, talked and chased each other on a small stretch of grass.</p> <p>One learner spontaneously tried to make a hand-stand. The teacher did not notice this creativity and therefore did not invite other learners to follow this girl's example.</p> <p>After a short while the teacher gave the learners a ball and then decided to join them. All free play by learners ended when the teacher became part of the ball play activity. She threw the ball to the learners and they had to catch it and threw it back to her. No spontaneous play was then anymore evident.</p> <p>The free choice play activity outside</p> | <p>• <b>Free-choice play [outside]</b></p> <p><i>The learners went outside to play freely. Learners walked and talked and chased each other. Some learners tried to make hand stands.</i></p> <p><i>The teacher handed out one ball. Most of the learners wanted to play with the ball. The teacher and assistant looked whilst they were throwing and catching the ball. However, after a short while, the teacher decided to join in with the playing with the ball. The teacher then controlled the game, whereby she threw the ball to learners and they had to catch it and threw it back to her.</i></p> |   |

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| in the classroom  | was done only for 15 minutes.   |  |  |
| Lack of developmentally appropriate practices<br><br>Lack of organizing and managing the Grade R classroom to enhance numeracy skills | When the bell rung at 11h00 for the Grade 1-9 learners to have their break, the Grade R learners were left to join their elder peers. No supervision was done by the teacher and the assistant, as they were having their tea inside the classroom. |  | <ul style="list-style-type: none"> <li>• <b>Formal break-time</b><br/><i>Learners walked around and mingled with the rest of the primary school learners as they were having their formal break-time.</i></li> </ul> |

## ANNEXURE Ab

**SILENT THEMES IDENTIFIED FROM EXTRACTS FROM A TRANSCRIPTION OF AN INDIVIDUAL INTERVIEW COMPARED WITH A TRANSCRIPTION OF AN AUDIO VIDEO TAPE OF CLASSROOM ACTIVITIES OF PARTICIPANT 15**

| Silent Themes  | Motivation for a “Silent Theme” being identified [inconsistencies and paradoxes, which occurred between the teachers’ beliefs, feelings, knowledge and experiences in their classroom activities].  | Extracts from transcription of individual interview regarding the teacher’s beliefs, feelings, knowledge and perceptions   | <i>Transcription of audio video tape of classroom activities</i>  |
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| <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p> <p>Lack of implementing planning in the classroom</p> <p>Lack of developmentally appropriate practices</p> | <p>The classroom was neat and clean.</p> <p>The fantasy corner and block play area were placed next to each other, with little space to play in. It was placed a half metre away from the tables and chairs.</p> <p>During the visit 15 of the 22 Learners attended school</p> <p>The teacher confused NCS and C2005 terminology – she used “Programme Organiser” which was used when C2005 was introduced.</p> <p>Three creative activity tables were set out.</p> <p>The walls were decorated with learners’ worksheets. No free choice drawings or pictures were observed or pasted on the walls..</p> | <p>The daily programme does have it’s pro’s and con’s. Like the daily programme is there to guide, Yes, but sometimes you have to be flexible. And change it then and there so that</p>  | <ul style="list-style-type: none"> <li>• <b>Classroom management &amp; organization</b><br/><i>A Book corner was set up in one side of the classroom. A “Show and Tell” corner with learners’ Portfolios were also displayed on the book shelves.</i></li> <li><i>A poster displaying the theme: “Water” was placed on the board.</i></li> <li><i>Above the poster of the theme, the heading was written out: “Programme Organiser: Water” and underneath it the context – “measuring and pouring</i></li> <li><i>The creative activities were set out on 3 work stations:</i> <ul style="list-style-type: none"> <li>• <i>Trace dots on pattern worksheets for direction</i></li> <li>• <i>Spread shredded paper pieces onto glued worksheet fish</i></li> <li>• <i>Colour in full/empty, more/less concepts on worksheet</i></li> </ul> </li> </ul> |
| <p>Teacher-centred</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of open ended questions</p>  | <p>It was a cold and rainy day with lightning and thunder storms, when the audio-video-tape of classroom activities was made.</p> <p>During the first morning ring, the teacher acted as a major with her troops around her. She requested the learners to recite and they responded obediently. There was limited discussion and or</p>  | <p>Are there times where you let them plan and do it? ... but are there any times in your class where you take guidance from them? Or is it mostly you that take the</p> <p>I don’t want to lie, no, I always, but, beside that, I usually let them talk about their experiences but it is</p> | <ul style="list-style-type: none"> <li>• <b>Morning Ring</b><br/><i>Learners stood in a circle while the teacher, also standing asked them “what day is it today?” The learners respond by saying: “It is Wednesday today”.</i><br/><i>The teacher then requested the learners to say the months of the year. The</i></li> </ul>  |

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| <p>which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>spontaneous interaction between the teacher and the learner. The learners knew what was expected from them and therefore, reacted accordingly. When the teacher asked the learners an open question [What does October mean?] she reprimanded them for not giving her the answer she wanted namely [October is the current month they are in]. The learner answered that October means that it is hot.</p> | <p>something that I brought up and then they can come in. But eh-eh, I never I think there is a need and I wish I could be part of that, so that I can learn them, do whatever,</p> <p>Take the guidance from them, yes.</p> <p>I am fine with learner involvement because, when they are involved, when they are participating hands-on, they just learn. Practically. If they are involved, they become so confident about that, because one knows I can do this. And when somebody didn't know what, we can help and I have noticed that, I don't know how to put it, but, if the learner, if one of them, does not understand, if one of them helped</p> <p><i>The crux of learner involvement means that all learning activities need to be learner-centred, and learner-paced.</i></p> <p>Yes.</p> <p>Okay, that comes under learner-centredness né</p> <p>Yes.</p> | <p><i>learners responded by saying that there were twelve months and then the learners named them one by one</i></p> <p><i>The teacher then asked the learners what is the name of the month that they were in currently? After a short while, when no one responded, she repeated the question. One learner said it was October. He was praised by the teacher and a handclap was given to him by his friends. The rest of the class repeated as a rhyme that the current month was October. The teacher then asked the learners what October meant? One child responded by saying that October meant that it was very hot. The teacher then requested the learners to think again and to answer properly. The learners recited the names of the months again until they came to October. The teacher requested the learners again what October meant and they answered that "October is the month that they are currently in". The teacher then asked the learners how many months were there before October? The learners recited the months of the year again whilst counting each month on their fingers. When they came to October the teacher showed the learners that they had 10 fingers in the air, thus October was the tenth month. The learners repeated that it was the tenth month. The teacher praised the learners and then confirmed that October was the tenth month. She then requested the learners to say again that October was the tenth month. She then praised them again and said they must clap hands for themselves, because they were clever. The teacher requested the learners to sing a song.</i></p> |
| Teacher-centred  | The teacher was in control of the   | Ja, I feel it that they must  | • <b>Counting activities</b>   |

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| <p>Lack of developmentally appropriate practices</p> <p>Teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> <p>Lack of open-ended questions which made an appeal to learners' creative thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>numeracy activities, whereby she handed out the pom-poms. Although the teacher let a few learners count and manipulated the pom-poms, the other learners had to sit quietly and watched what was going on.</p> <p>The teacher controlled the adding and doubling activities. She placed the pom-poms in front of herself and asked the learners how many pom-poms there were. She asked the learners in a group and received a group response. There was no checking whether all the learners understood what was going on. The learners themselves did not manipulate the pom-poms in these activities. There was no spontaneous counting or interacting with the material or even role-playing the adding activities during free play, where learners could freely explore and experiment with the pom-poms.. The teacher asked a question and the learners responded. There was no discussion of what was going on, what the aim of the activity is and how to get to the answer. No real problem-solving questions were posed except a closed question received a correct or wrong answer. Only one problem-solving question was asked when the teacher asked the learners what could she do to have ten pom-poms. She expected a closed or just one answer namely that she must add another pom-pom to the other nine pom-poms.</p> | <p>count every day because in life, they will be counting every day. So I want them to experience every day an activity about counting, doing, using those maths language, plus, it is one plus one, I was doing it in Xhosa.</p> <p>... you had two and you brought another two, so it was actually doubling.</p> <p>Yes.</p> <p>I wasn't trained on that. Since their age, I do it in simpler form. So that they can move with me. I must not try to use the big words, they will be frightened, they won't understand. So I, it was my idea to just to do it that way so that they can go with me.</p> <p>There is that gap. Because sometimes, I ran out of ideas. I would like to have that training.</p> <p>. We were doing that counting, we do it everyday.</p> <p>It is difficult to count backwards, somebody said that for learner's involvement. Have you experienced that as well?</p> <p>Yes. And as a result I forget even to do that</p> <p>But cannot demonstrate counting in two's with counters. That's what you've said to me né?</p> <p>They cannot count backwards because if you give them the objects, they don't know how to do it, but they can do it orally?</p> <p>Yes. The others [unclear] but when it comes to take one</p> <p>One to one correspondence?</p> <p>Yes, they cannot do it. They cannot do it. So it's more, they've got like a rhyme, parrot like, but they don't know how to do it physically né?</p> <p>Yes.</p> <p>Do you normally focus on sequencing?</p> <p>It's coming up sponta-</p> | <p><i>The learners sat in a circle on the carpet. The teacher sat on a chair right in front of them. A learner was busy to count out 10 pom-poms in isiXhosa, in the middle of the circle, whilst the other learners looked what she was doing. When the little girl reached 10 she stopped, and the class clapped spontaneously, without any encouragement from the teacher.</i></p> <p><i>The teacher invited any learner to come and count out the pom-poms.</i></p> <p><i>A little girl came forward, using the same 10 pom-poms, she grouped them in a circle, and then one by one, she counted them out. This activity was followed by another girl who repeated the counting activity, but this time in Afrikaans. The other learners looked what she was doing whilst she was counting out loud in Afrikaans. When she finished she received a hand clap applause.</i></p> <p><i>The teacher placed a pom-pom in front of her and placed another one next to it. Then she asked the learners how much was one plus one? The learners responded by saying it was two. The teacher then requested the learners to clap hands for themselves.</i></p> <p><i>The teacher took another two pom-poms and put it in front of her. She added another two pom-poms to the existing two pom-poms and requested the learners how much was two plus two? The learners started to guess by saying it was four, five and six. The teacher repeated the adding activity. The learners counted the pom-poms while the teacher pointed to it one by one.</i></p> <p><i>The teacher then asked again, how much was two plus two. The learners answered in a group that it was 4.</i></p> |
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| <p>Lack of developmentally appropriate practices</p> | <p>Very few learners (3) were given the opportunity to count the dots on the number flash cards, then to proceed and made in the air a number symbol before drawing the dots and making the number symbol on the black board with which chalk.</p> | <p>neously.<br/>         You don't plan for it?<br/>         I don't plan it.</p> <p><i>Touching and feeling concrete is very important for numeracy development.</i><br/>         Yes.</p> <p>... how do you feel about the Learning Outcomes.<br/>         Do you feel you cover all the bullets and all the outcomes?<br/>         Mmm-mmm.<br/>         Not.<br/>         I need more guidance.<br/>         Yes, because it is a little bit confusing, sometimes I am not sure whether I do the right thing or what is it I am doing, I need<br/>         You need more guidance?<br/>         Yes.</p> <p>... you say you do not cover all the learning outcomes and assessment standards and you need more guidance on that</p> <p>The planning, I feel not, it is too much, it's like you must do writing instead of doing it practically?<br/>         Yes.<br/>         But planning, it must be there so that it guides you.<br/>         So that you know what you must do?<br/>         Yes.<br/>         And that your teaching covers everything?<br/>         Because when I do it alone or today with F, sometimes I get confused, oh no, but in the meantime, although we get confused, when trying to plan, I am confident when I am doing something in the class. I know it's<br/>         You know what you want to do.<br/>         Yes.</p> | <p><i>The teacher praised those learners by saying "Good" and requesting the learners to clap their hands.</i><br/> <i>The teacher put 4 pom-poms on the floor in a line, next to one another and asked the learners how many pom-poms were there?</i><br/> <i>The learners started to count it and answered 4.</i><br/> <i>The teacher placed another pom-pom on the left side and another pom-pom on the right side of the linear 4 pom-poms. She then asked the learners how many pom-poms there were?</i><br/> <i>The learners started guessing again, 5, 6</i><br/> <i>The teacher started to point to each pom-pom and let the learners count with her until they came to 6.</i><br/> <i>The learners clapped an applause.</i><br/> <i>The teacher lined out 5 pom-poms in a horizontal line and asked the learners how many pom-poms there were. The learners started to count until they came to 5.</i><br/> <i>The teacher added another pom-pom to the 5 and asked the learners how many pom-poms there were.</i><br/> <i>The learners responded in a group by saying there were 6. The teacher praised the learners by saying "Good".</i><br/> <i>The teacher added another pom-pom and asked the learners again how many pom-poms there were. The learners responded by saying seven. The teacher praised the learners by saying they were very clever and she clapped with them an applause.</i><br/> <i>The teacher added another pom-pom and the learners responded by saying there were 8.</i><br/> <i>The teacher added another pom-pom and the learners responded by saying there were 9 pom-poms.</i></p> |
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|  |  | <p><i>The teacher requested the learners to show nine with their fingers. The teacher praised the learner and there was another round of applause.</i></p> <p><i>The teacher then asked the learners what must she must do to make it 10? The learners responded by saying that she must add one.</i></p> <p><i>The teacher requested all the learners to stand up and whilst she was miming it out, the learners copied her actions and said the counting rhyme, "One, two, buckle my shoe".</i></p> <p><i>A learner stood on a chair and counted the flash cards, 1, 2, 3 in English</i></p> <p><i>The teacher interrupted the child by requesting the child to go to the number four flash card. The child had to begin counting from the number 4 flash card, counting the four dots i.e. 1,2,3,4. The teacher then requested the learner to make a number symbol 4 in the air. The teacher requested the learner to use the hand which she normally used to write. She also requested the learner to write the 4 on the black board and to draw 4 objects, whether it were eggs or apples.</i></p> <p><i>The learner took a piece of chalk and drew on the blackboard 4 circles, counting it out loud whilst she drew it. The teacher praised the learner and there was another hand clap.</i></p> <p><i>Another child volunteered to come to the black board and drew 7 circles.</i></p> <p><i>This girl started by counting the number flash cards from 1 to 10.</i></p> <p><i>The teacher requested her to count the dots on the flash card 7. The girl counted the 7 dots and made a 7 in the air, before starting to draw a circle on the board. The teacher interrupted her by requesting the learner to draw a number 7 first on</i></p> |
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|   |  |  | <p><i>the black board. The learner made a 7 and proceeded then to draw 7 circles on the blackboard. She was rewarded with a handclap.</i></p> <p><i>This activity was repeated with another volunteering girl who started to count the number flash cards 1 to 3. At the number 3 flash card, she counted the 3 circles on it. On the teacher's request, she traced with her finger around the number symbol 3.</i></p> <p><i>The learner drew a number symbol 3 in the air and was praised by the teacher. As requested by the teacher, she took a piece of chalk and drew a 3 on the blackboard.</i></p> <p><i>The learner was praised by the teacher and received a hand clap from the rest of the learners. The learner proceeded to draw 3 circles next to the number 3.</i></p> <p><i>The learners stood in a circle with the teacher in front of them, doing large motor exercises.</i></p> <p><i>The teacher also swung her arms in the air. One girl started to sing a song [We love our teacher, she teacher children every day] and did the rhythmic actions to it. The other learners and teacher followed her example.</i></p> <p><i>The teacher thanked the learner</i></p> |
| <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p> | <p>No three-dimensional objects were put out on the theme table for discussion, nor was there any reference to pictures depicting the theme.</p> | <p>... do you feel resources are very important? They are very important so that they can make the learner interested, interesting and hands-on concrete?</p> <p>Yes, yes. If you've got something, an object to grasp, at least the learner will have an idea of it. And they learn through play</p> <p>Yes, so resources are needed.</p> <p><i>Resources can be used to make numeracy experiences for learners more interesting.</i></p> | <p>• <b>Theme Discussion and Measuring activity</b></p> <p><i>The teacher asked the learners what could they do with water. They replied they drunk it. The teacher then asked: "When do you drink water?". Some children replied "When you are thirsty". One child replied that "You drink water when you've got the hiccups". The children also said one could use water when you've got washing or when you wash your car or doing the dishes. The</i></p>   |

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| <p>Teacher-centred</p> <p>Lack of developmentally appropriate practices</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Teacher herself being a barrier due to lack of knowledge and skills especially regarding remedial skills</p> <p>Lack of going beyond the minimum requirements of the assessment standards</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> | <p>The teacher dominated the measuring of water activity. The teacher instructed a learner to pour water whilst the other learners had to watch in silence. She did not ask any problem-solving questions and did not discuss with the learners why she was doing this measuring activity.</p> <p>The teacher did not ensure whether all the learners understood the concepts more or less, full or empty.</p> <p>She did not explain that it was also opposites or how it is related to their everyday life. Again, only one learner participated and no opportunity was given to learners to explore and experiment during free-play with these concepts.</p> | <p>Yes.</p> <p><i>The three dimensional resources can be used concretely in order for learners to explore numeracy concepts.</i></p> <p>I would like to, I don't know how to put it, but the guidance for the three-dimensional</p> <p>What I would like the learners to know as well ...difference between 2-D and 3-D?</p> <p>Are you doing everyday measurement, because your theme was water?</p> <p>Not every day.</p> <p>Because the theme was about measurement for today. And I did not focus because even tomorrow I have to do it again so that others can have a chance to do it.</p> | <p><i>children also replied that one could use water when brushing your teeth as well as when you scrub the floor and water the plants. A girl said that one could use water to wash the windows. The teacher reminded the learners that they should wash their hands before they were going to eat. The learners also said one should wash his/her hands when they were finished at the toilets.</i></p> <p><i>All the learners sat in a circle on the carpet. The teacher was sitting in front of the learners. She showed a jug with water and requested a learner to pour water with the jug into a small bucket. The learner did it, filling the jug 5 times. Whilst the learner was pouring the water into the small bucket, the other learners were looking at the actions in complete silence. The small bucket was filled three quarter full. The teacher asked the learners how much water was in the bucket?</i></p> <p><i>They responded by saying it had much water in it. The teacher pointed out that in the small bucket there was much water whilst in the other small bucket there was no water. She then requested the learner to pour water with the jug into the empty bucket. He poured only two cups of water into the empty bucket and was then stopped by the teacher. The teacher then picked up the bucket with more water and asked the learners how much water was in the bucket? The learners repeated her answer by saying "much maninzi, much water". She then picked up the bucket with lesser water in it and said: "mancinci, less". The learners repeated what she said. The teacher picked up the bucket with more water in it and said "More". She</i></p> |
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|   |   |   | <p>requested the learners to repeat. They said "maninzi, more". She then picked up the bucket with lesser water in it and the learners responded by saying, "mancinci, less".</p> <p>She repeated the actions of more and less once again by lifting the two buckets and the learners in a group said which was which.</p>   |
| <p>Lack of developmentally appropriate practices</p> <p>Lack of open-ended questions which made an appeal to learners' creative thinking, reasoning and problem-solving skills</p> <p>Lack of Numeracy concepts and skills and how to implement it in a hands-on approach</p> <p>Teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> <p>Teacher-centred</p> | <p>Learners were expected to do only one worksheet for an hour. Once they were finished, they had to wait for the other learners to finish.</p> <p>No spontaneous creativity was encouraged and the learners were expected to concentrate on finishing the worksheet in front of them. Although the teacher did explain to each group what was expected of them, there was no spontaneous discussion of the worksheet. The teacher did not use the learners' own initiative and creativity, for example, when a learner was finished with his activity, he started to place the coloured crayons in a line and let them balance by themselves. The girl next to him, followed his example.</p> <p>Especially in the case of the full/empty, more/less worksheet, the learners had to watch what the teacher was doing concretely, but had to use that information and apply it two-dimensionally on the worksheet. All activities were conducted in a hushed silence atmosphere.</p> <p>The teacher also failed to use the learners' own lead and creativity regarding dance movements. When the learners had to wait on the carpet for their friends to finish, some of them started spontaneously to do "mine boot dancing". The teacher just ignored this activity.</p> <p>The teacher dominated the fish activity, as she, instead of the learners, was painting glue onto the fish pictures.</p> | <p>Do you put out everyday three worksheets?<br/>Yes, different worksheets.<br/>Yes. Every day, they must do different, you see today, they didn't change.<br/>I like to do it like that. Tomorrow they will be busy with that activity, I will just change them. I change them, the learners.<br/>Yes.<br/>They rotate on the next day?<br/>On the next day, yes.<br/>So at the end of the week, everybody did all three worksheets?<br/>Yes.<br/>Do you find that that is stimulating enough? Because some of the learners finished quickly.<br/>Mmm.<br/>And they had to wait for the others<br/>It is not stimulating, no.<br/>Would you like to have more than one activity?<br/>Yes.<br/>Why don't you do it like that?<br/>I need guidance on how to do it, I can try and plan it. Because there is this planning business. Sometimes you don't know what to do. So, sometimes, yes, I need guidance.<br/>Do you do normally, do you've got paint?<br/>I've got paint. I've got a lot. We usually do the painting but today we didn't do that.<br/>... when you had those fishes, you put the glue on the pictures for the learners, you painted it on.<br/>Why, if I may ask?<br/>I usually do it because they mess. But I usually tell</p> | <p>• <b>Creative activities</b></p> <p>One group of learners were standing around a table with worksheets on it, depicting the more/less concepts. The teacher asked the learners if they could see pictures of water on the worksheet. They responded by saying yes, they saw it in the pictures of the bottles, the glasses and the jugs. The teacher then asked the learners to show her where was the water poured on the worksheet's first line? The children said the water was in the glasses. The teacher instructed the learners to colour in the full glass with water</p> <p>At another table, the teacher discussed with the learners the worksheet and the learners were instructed to use crayons to trace on the worksheet the dots, to follow a left to right direction and to follow curves and straight lines. Whilst the learners were busy with this tracing activity, it took place in complete silence</p> <p>At another table, the teacher poured out some glue and painted the fish with it. The learner then took some shredded paper pieces and placed it on the worksheet with the fish picture on it which was now full of glue. The teacher requested the learners to cut the pieces of paper in smaller pieces, if they find it too big. The teacher requested one learner to put some red pieces of paper also on her</p> |

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| <p>Limited opportunities for learning through play</p> <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skill</p>         | <p>Free-play and creative initiative took only place when the learners had finished completing their worksheets. The teacher did not notice this spontaneous experimenting and therefore did not encourage learners to discover and learn through their own play. She only expected from them to sit quietly on the carpet, instead of organizing her classroom in such a way that learners could enhance their numeracy skills with educational toy opportunities.</p>   | <p>them, it must be you, who do it but guys, I cannot eh-eh, let me just do it for you. Well, I know it is wrong, but I do it.</p> <p>... do you have other learners that struggle?</p> <p>Yes. Yes.</p> <p>But do you find that they turn it around? For instance, when they do a 3 like this or when they make a 6 they make it like that? Or a 7, they make it like this? Do you find I find that they do that.</p> <p>With barriers to learning, have you ever been trained on that?</p> <p>Yes, we do get that training but I for myself, I am not confident</p> <p>... because sometimes I will say, no, just tell your mother to help you and you don't know how to do it yourself.</p> | <p><i>fish picture. This activity also took place in complete silence.</i></p> <p><i>The teacher rotated to another table, where she assisted a learner how to start tracing the dots on the worksheet. The teacher guided the learner to start from left to right. Once the first pattern was finished, the learner had to go to the next pattern beneath it. She praised the learners who completed this work-sheet. The teacher rotated amongst the tables, re-requesting the learners not to copy their friend's work.</i></p> <p><i>Once a learner was finished with his worksheet, he just sat silently, waiting for the rest of his friends to complete their worksheets. One learner who finished his worksheet on tracing the dots patterns, spontaneously placed some of the pencils in a line and balance it. The girl next to him followed his example.</i></p> <p><i>As more learners finished their worksheets, they were requested to sit on the carpet waiting for the friends. One learner started to dance spontaneously, entertaining his friends and some laughter occurred. Another child joined him with his dancing</i></p> |
| <p>Teacher-centred</p> <p>Lack of open-ended questions which made an appeal to learners' creative thinking, reas-oning and problem-solving skills</p> | <p>The teacher dominated this activity by telling the learners which rhyme they had to dramatize, instead of giving them an opportunity to choose which rhyme they would like to dramatize.. There was no discussion of the rhyme or any questions being asked. The learners just had to perform.</p> <p>The teacher dominated the story activity by having the learners listening to the story whilst she manipulated the story TV box. Limited closed questions were asked and no discussion of the story took place. When the learners dramatized the beginning of the race, the teacher also dominated by</p> |  | <p><b>• Dramatizing of rhymes and songs</b></p> <p><i>The learners was requested to dramatize some rhymes about water. The teacher joined them in dramatizing and acting out rhymes and songs. The teacher then requested them to sing an English song, "Down by the river".</i></p> <p><i>The teacher asked the learners to tell her which animals was which when she pointed to it. The teacher demonstrated the concepts fast and slow to</i></p>   |

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| <p>Lack of developmentally appropriate practices</p>   | <p>instructing them to "Get ready, on your marks and go". However, some learners repeated the story. No opportunity was given to learners to tell a story of their own choice.</p>   |   | <p><i>the learners and asked the learners what the hare did. A learner responded by saying the hare ran fast but the tortoise went slowly. The teacher proceeded to tell the story. A learner retold the story. The teacher and the learners dramatized the starting of the race of the story. Another learner retold the story, with the teacher from time to time, interacting with the learner, to demonstrate fast and slow.</i></p>   |
| <p>Lack of organizing and managing the Grade R classroom to enhance numeracy skills</p> <p>Teacher herself being a barrier due to lack of knowledge and skills, especially regarding remedial skills</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Limited opportunities for learning through play</p> | <p>The doll area and the block area were placed next to each other, half a metre away from the creative art tables. There was not enough room for building with the blocks and only a few learners (3) could play with the dolls.</p> <p>The teacher missed out on opportunities to encourage learners to experiment, discover and to explore with the educational toys during the free-play activities, when she swept the floor.</p> <p>One learner acted out the concepts of inside and outside, when he built a shelter in which he placed some objects. However, the teacher failed to notice this spontaneous act of playing out concepts and did not comment on it. Another learner started to build a tower and again the teacher did not comment on the concept of height and balance.</p> <p>No other free play activities were put out and the learners were limited to play with the dolls, cutlery, wooden cars and blocks. Although spontaneous discussion took place between the learners, the teacher did not intervene in their play. She did not ask any problem-solving questions and or point or re-</p> | <p>There were puzzles<br/>There were puzzles, but you did not put it out today?<br/>Yes.<br/>Do you normally put it out?<br/>Not usually, eh-uh.<br/>I do not want to lie, but I find it very difficult to get them involved, really. There were ladies, there was that lady, that usually comes on Wednesdays, then I ask them to help me with the puzzles. And then we divided the learners and the other lady can take the other group and the other lady take 'cause on my own, I cannot [unclear].<br/>So<br/>So these ladies, do they build the puzzles with the learners then? Do they assist the learners in building the puzzles?<br/>Yes, the assist them and I can see that our, more especially our teachers, are not familiar with the puzzles<br/>Yes, and then we usually buy the toys, we don't usually buy puzzles.<br/>That's why, it's new, they just take the pieces, the other one wants to eat the pieces, the other put it in the [unclear]. So I'm not that involved in puzzles.</p> <p><i>Play dough?</i><br/>I don't have.<br/>You don't have. Do you've got a recipe of play dough?<br/>It's years that I've got the</p> | <p>• <b>Free-play activities</b><br/><i>Whilst the learners were going to the toilet and coming back to the class, free fantasy play was conducted by a learner, playing with a doll. Two other girls joined her and placed the dolls on their backs. Free and spontaneous conversations regarding the babies started to take place amongst the "mummies". On the carpet a boy was playing with a wooden car. The learners engaged in Free play activities such as playing with dolls in the fantasy corner area and building with the blocks in the block area. Whilst the learners were engaged in free play the teacher swept the carpet. Because of the lack of space, some learners started to move to the tables and play there with the dolls and the cutlery. Some boys started to play with the wooden cars and blocks on the carpet.</i></p> |

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|   | inforced any numeracy concepts that were being played out by the blocks.  | recipe,<br>But you don't make use of that?<br>I don't even try to<br>Why not?<br>Laziness. |  |
| <p>Lack of developmentally appropriate practices</p> <p>Teacher-centred</p> <p>Lack of open-ended questions which made an appeal to learners' creativity, thinking, reasoning and problem-solving skills</p> <p>Lack of going beyond the minimum requirements of the assessment standards</p> <p>The teacher herself being a barrier due to her lack of knowledge and skills especially regarding remedial skills</p> | <p>No opportunity was given to each child to choose his or her own book, nor to page through it spontaneously.</p> <p>This story time was different from the previous story time because a few individual learners were allowed to look at the book, and to share what they saw and showed the pictures of the book to the other learners. However, this activity was controlled by the teacher. There was no in-depth discussion of the books, with limited reference to the title, the author, and how to handle a book correctly. Only one or two pages were discussed by the learner before another learner could discuss one or two pages of his/her book. Thus, a story book is not being dealt with from the beginning to the end.</p> |  | <ul style="list-style-type: none"> <li>• <b>Story time</b><br/><i>[Tell &amp; Show]</i><br/><i>The learners sat in a circle formation on the carpet with a book placed on the carpet, for every two learners to share. Whilst the books were handed out, the learners sat with their arms folded, watching in complete silence.</i></li> </ul> <p><i>The teacher requested a learner to share with the learners what she observed in her story book. The learner discussed the front page of the book. She showed the title page of the book to the learners. The teacher intervened by requesting the learner to share what she saw and that she should tell it, one by one to the other learners. The learner proceeded by telling the learners again about the title page, describing to the learners that the picture on the front page was showing a boy wearing his school uniform, the shirt etc.</i></p> <p><i>The learner showed again the title page of the book to the learners, but, as she was walking from child to child, the learners who were sitting, had barely a chance to see what was displayed on the title page of the book because the learner moved the book quickly to another learner. Sometimes the book was shown at a high angle.</i></p> |
| <p>Teacher-centred</p> <p>Lack of open ended questions which made an appeal to learners; creativity, thinking, reasoning and problem-solving</p>  | <p>The movement activities were dominated by the teacher, who did not invite creative or any spontaneous movements. The learners had to copy her actions and movements. There was no discussion in this regard as well as no problem-solving questions posed.</p>   |  | <ul style="list-style-type: none"> <li>• <b>Movement Activities</b><br/><i>The learners stood in a circle formation on the carpet with the teacher in front of them. She requested them to balance on one leg whilst their arms were spread out. The learners had to count to 10 whilst they were balancing on one leg.</i></li> </ul>   |

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| <p>skills</p> <p>Teacher herself being a barrier due to lack of knowledge and skills especially regarding remedial skills</p> | <p>Although the teacher identified learners were having a problem between left and right, she did not know how to remediate it. Instead of requesting a learner to assist his peers, she should have positioned herself not facing the learners, but standing in front of them and then, by looking backwards, ensured that they copied her actions correctly. She could also given each learner a ribbon on the right hand, to remind the learners which side was right.</p> | <p>They were then requested to change legs and count again from 1 to 10. The teacher requested them to bend as if they were going to touch their toes with straight knees, again counting to 10. The teacher requested the learners to follow her example and swing the one arm, whilst counting to 10. She demonstrated to the learners to touch with their right arm the left knee. Some learners were not able to distinguish between left and right, therefore the teacher went to each learner checking that he/she was in the correct position. When the learners experienced problems in executing the cross-over instruction, the teacher grabbed a learner, instructing her to demonstrate to the learners how to cross with her right arm to her bend-up left knee. The teacher demonstrated again the cross-over action but this time she was facing the learners, thus it looked as if she was crossing with the left arm to the right leg, whilst the learners had to do it with their right arm to the left leg.</p> <p>When the learners still did not understand, she grabbed another girl, as if she was a puppet, using her left arm to touch her right leg, counting rhythmically.</p> <p>However, when the learners were instructed to execute this action, they copied the learner and it was again wrong because they used their left arms and not their right arms.</p> <p>The teacher asked the learners how many bums did they have and they answered "Two". She then requested the learners to show her their ears. Spontaneous laughter occurred when a child answered: "Two bums".</p> | <p>• <b>Break time</b><br/>The learners joined the rest</p> |
| <p>Lack of implementing</p>   | <p>Although break-time did not appear on the daily programme, the teacher</p>   | <p>... is that you've got an outdoor play, about eleven</p>  | <p>• <b>Break time</b><br/>The learners joined the rest</p> |

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| <p>planning in the classroom</p> <p>Lack of developmentally appropriate practices.</p> | <p>let the learners joined the rest of the school at 11H30 to play and mix with the other learners outside, despite the rain. The classroom was then locked.</p> | <p>o'clock, when the bigger children break, you also break with the learners?</p> <p>The school feels that we must fit within, so that the learners, they move from my class to the others, they can be familiar. By the time I arrived, I did not see, I wasn't feeling comfortable, more especially, the kids were small So I thought the others would bully them, But now I saw that they are their big brothers and sisters. They usually come to my class, take them home, so I feel fine</p> | <p>of the school to play and mix with the other learners outside, despite the rain.</p> |
|  | <p>No free choice outdoor play could take place due to the bad weather outside.</p>  | <p>Mmm, today it was raining and we could not go outside, so I have to improve and be flexible and to see what I could do, because the kids got to do something.</p>   | <p>• <i>Outdoor free choice</i></p>   |