

**RHODES UNIVERSITY  
DEPARTMENT OF EDUCATION**

**Research Portfolio**

Presented in partial fulfilment of the requirements for the  
Degree Master of Education  
(GENERAL EDUCATION THEORY AND PRACTICE)

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## **Personal Profile**

I was born at Uvhungu-vhungu, a small village in Kavango Region (Namibia) 5 kilometres east of Rundu. I attended my primary education in this village up to Grade 6. Due to my religious influence that time I completed my primary education in 1978 at Sambyu Primary, a Roman Catholic school.

In 1979 I furthered my education at Rundu Secondary School where I completed my Grade 12. I also enrolled for ECP (Educational Certificate Primary) at the same school and completed in 1986.

Thereafter I started working at Rundu Senior Primary School in 1987. After teaching at different schools for eleven years, I decided to further my studies at the University of Namibia in 1996 where I obtained my first degree B.Ed in Home Science.

I am engaged in many community activities e.g. church activities. I enjoy cooking, doing needlework and travelling.

My achievements include being a student at Rhodes University and my promotion from a secondary teacher to a lecturer at the Rundu College of Education. The reason why I regard admission to Rhodes University as being an achievement is because of the many things I have learnt in the MED programme.

**Contextual Analysis  
of the Home Science Curriculum at  
Rundu College of Education**

## Acknowledgements

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I thank God for His everlasting mercy and for giving me strength, knowledge and power.

## 1. Introduction

The study involved student teachers and teacher educators providing me with information concerning their perception and understanding of the BETD broad curriculum and needlework and clothing syllabus. The above mentioned are the people who are involved in teacher education thus I found it relevant to have their opinions and understanding of the documents. The contextual analysis has engaged me in exploring a possible area of research specialisation for the two years during the course of studies with Rhodes University; this will serve as an introduction to the particular research to be done through the course of my studies. The focus of this report includes the following:

- A critical analysis of (BETD) needlework and clothing syllabus in relation to the BETD broad curriculum;
- A socio-historic and economic analysis of the context for which the syllabus has been designed;
- An analysis of the learners for whom the syllabus is designed. In this case students provided their autobiography;
- An analysis of the learning environment in which the syllabus operates; the physical structure and resources.

Together with the critical analysis of the curriculum a small scale survey intending to find out the following information from the student teachers and teacher educators was conducted.

- The extent to which the broad curriculum differs from the previous teacher education on issues related to democracy, quality, access, cultural bias, racial discrimination and classes (level of economic status);
- How the needlework and clothing syllabus addresses the needs of student teachers;
- Whether the needlework and clothing syllabus has enough content;
- The challenges facing teacher education and how they can be addressed;
- Whether the needlework and clothing syllabus is learner-centred;

- Whether the syllabus is gender oriented or biased.

This evaluation framework provides a foundation for later investigation.

## **2. Methodology**

### **2.1 Methods of data gathering**

During data collection (1) document analysis, (2) case study, (3) small-scale survey, (4) cameo studies and (5) observation were used. I firstly started with the socio-historical background and economic situational analysis knowing where I come from encouraged me to start with this part. It engaged me in reading books, journals and documents for reference purposes. My own experiences and observation were also used to gather information. I compiled guidelines for student teachers to provide me with their autobiography. Only three third year students from 3D majoring in Home Science were used, they all provided their information in writing. The learning environment analysis was done through going around the campus to assess the available amenities and facilities the institution has. The analysis of teaching/learning strategies was done through observation and through reflecting on my experience at the college.

The curriculum analysis involved me in a desktop analysis as well as in a small-scale survey where questionnaires for colleagues and students were used. Due to limited time, only a limited number of participants and questions were used. In this study the type of questions used were opinion questions, open-ended questions and to some extent contingency questions. According to Bless and Higson-Smith (1995:119-122)

*factual questions ask for objective information about respondents, such as their social background or related to personal data such as age, sex, marital status, level of education and so on. Factual questions seem easy to answer since they are straight forward and so do not influenced the respondent. But a common mistake is to allow for ambiguity...*

According to the writers, the respondent sometimes might refuse to participate or to disclose personal matters. Furthermore opinion questions are more problematic since the respondent is the only person who knows the true answer and they might be influenced by what he/she considers socially desirable. A racially prejudiced person

would feel uneasy and avoid the disclosing of such feeling. While contingency questions are a special type of structured questions, which apply to sub groups of respondents only, namely the ones who have given a particular answer to a previous question, to give a very simple example.

Observation which played a big role during my data collection is, “particularly suited to case-study research because of its potential to develop an in-depth picture of the case and of the social relationships of which it is a part” Oliver in (Bless and Higson-Smith 1995:122)

The documentary research methodology engaged me in the reading of books, documents and handouts which I received during the first contact session and it was more difficult to select suitable data.

The schedule for developing the instruments for data collection and analysis of findings is shown below in figure 1.

Fig.1. Time plan of development of instruments, data collection and analysis of findings

20 Feb-6 March 2002	7 March – 4 April 2002	5 April – 9 April 2002
Development of questionnaire and guide for the biography studies	Distribution and collection of questionnaire and biography	Analysis of findings

## **2.2 Difficulties encountered**

The first big problem experienced was to start writing; it took days of reading the same paper before starting to compile questionnaires, which in turn took days of rewriting before deciding to accept them. The other big problem encountered was to get participants in the study to answer questionnaires. Most of the people who were approached refused and my friendliness could not convince most of the people. The

other big problem was the collection of questionnaires before the due date, when I approached the people who were willing to help me; one of them returned my paper without answering a single question so I had to get someone else to answer my questionnaires. Ten questionnaires were handed out, five to student teachers and five to teacher educators; only seven were received back on the due date. Another problem was not having enough Home Ecology syllabuses for all my participants; this forced me to give them more time so that each of them could have access to the syllabus. I made two extra copies of syllabuses to use.

Table 1 Number of questionnaire responses and autobiography study

Instruments	Teacher Educators			Students			Total	
	Female	Male	Total	Females	Male	Total	Female	Male
Questionnaires	2	1	3	2	1	3	4	2
Biography studies	-	-		2	1	3	2	1

### 3. Analysis

#### 3.1. Analysis of the Needlework and Clothing Syllabus

The desktop analysis of the needlework and clothing syllabus (BETD) is meant to provide an evaluation framework that will form the basis of later investigations, as well as documentary evidence for further development of the above mentioned syllabus.

The focus is placed on the following areas:

- The extent to which the syllabus addresses issues of democracy, equity, access, redress, equality and a safe environment;
- The underlying epistemology of the syllabus and the extent to which it is situated within the subject;
- Providing opportunities for learner-centred education from within constructivism;

- The learning area or discipline in terms of developing the conceptual understanding, values and attitudes, and skills that underpin the particular learning area;
- A comparison between the preamble and the content as well as assessment strategies used;
- To assess the current perceptions of the BETD broad curriculum, concerning its strength and weaknesses.

Since independence teacher education reform in Namibia has been regarded as a priority, since it was believed that teacher education could make a difference. According to Angula (1990:24) cited in (Working Together Towards Teacher Education Reform, September 2000:4):

*the teachers are prime movers in Education delivery. Their attitudes, inclinations and competencies will to a large measure, determine the quality and operation of an Education enterprise. Priority should therefore be given to teacher training and the management of the teaching service. There is an urgent need to develop...the pre-service teacher training program that should be improved and revamped to respond to the critical demands of participatory learning.*

A lot of effort and time was invested in transforming education practices including curriculum and syllabuses. This was done while considering the four major goals: Access, equity, Quality and Democracy (M.E.C. 1993:32-42).

### **3.1.1 The home science education syllabus**

This syllabus consists of two components, Home Economics and Needlework and Clothing, the content areas are compiled separately as they are two different subjects in the BETD three year programmes, to equip student teachers with needed knowledge and skills as from term three of first year to the ninth term. The Needlework and Clothing course concentrates mainly on the acquisition of practical techniques and principles needed to teach this subject successfully. After a successful completion of the course a student will be able to teach learners from Grade 8-10. The syllabus

provides a fair chance to all to meet requirements that are required by the Broad Curriculum. It supports, promotes and develops democracy in its objectives and competencies, for example the learners are given the freedom to choose from different activities without any restrictions. The objectives in some topics give freedom to the participants to choose what they feel comfortable in doing. It calls for the participants' exploration of ideas, improvisation with materials and tools.

The students are given the freedom to choose any garment to mend as well as the method of how to mend. This reflects the constructivist belief of "*Knowledge is constructed in the mind of learner*" Bodner (1986:873). What and how questions are in the hands of students during this time to come up with own initiatives. "*Knowledge is not passively received, but actively built up by the cognizing subject*" (Von Glasersfeld 1989:182 cited in Ernest 1993:1).

This syllabus does reflect an equality of gender, cultural, race, and economic classes. It does not discriminate, but it enhances human dignity despite its discriminatory historic background of educating females only. This was done due to the beliefs of that time, which placed the subject (Home Ecology) as a process of preparing school-going girls to become good house keepers for their husbands one day when they got married. Another reason was to prepare black domestic workers who will be able to work for whites. The cultural belief in most African cultures is that domestic work is meant for women, which is being redressed and reformed. It also provides students with quality information that is relevant to the developmental level of their future learners in schools e.g. learners can develop entrepreneurship skills as well as employment opportunities through doing this subject.

The syllabus ensures a safe environment, safety measures when using sharp object e.g. the protection of fingers with a thimble and the handling of equipment that might cause injury. The topic of equipment and apparatus addresses the correct use of equipment to avoid accidents in the workroom (BETD Home Ecology Syllabus, 2001:33). The other theme is the care of garments and information of care labels that ensures prevention of accidents (BETD Home Ecology Syllabus, 2001:32).

### 3.1.2. The Epistemology

The rationale in the syllabus preamble is based on constructivist principles. It views knowledge as not a static amount of content but is what the learner actively constructs from experience and interaction within the socio-cultural context. This means that within their studies, students are expected to participate in learning, and implement teaching, through learner-centred approaches. Teaching, learning and the assessment process are intended to model approaches that constantly build on the students' experience and active participation. This is to prepare and to ensure that students are equipped with knowledge, skills and experiences to be able to apply their subject knowledge through these approaches in their own teaching. From this view one could say the epistemology is a social constructivist view which contends that knowledge does not exist outside of a person (Confray; Piaget and Inhelder; von Glasersfeld as cited in Etchberger & Shaw 1992). The approaches and method of the syllabus reflect the constructivist model that allows or invites the students' active participation, creativity and expressive communication abilities.

Although the syllabus is based on a constructivist model, much of the actual content in the syllabus reflects a behaviourist approach in which cause and effect are presented in the form of givens. One such example is the identification of textiles which is done through a burning test. This exercise of experimenting helps the learner to make meaning of the content.

*This tradition was received by Roger Bacon...without experience nothing can be known sufficiently and William of Ockham, and later extended in the treatises of Sir Francis Bacon, who gave such impetus and authority to the formula of direct sense experience observation, the accumulation and classification of data acquired in this way, experimentation, the induction of probabilistic conclusion, the elimination of incorrect hypothesis (McClure 1928, September 1975 cited in Aspin 1981:23).*

### 3.1.3 The content area

The syllabus content develops a conceptual understanding of the students due to its practical focus that engages students in designing plans and even during garment constructions where they are required to come up with their own pattern construction through imagination or imitation, by modifying old patterns with features such a collar, sleeves and style lines or fasteners. The above mentioned shows that the child is gaining experience through doing and learning takes place.

*Many teachers perceive the child's experience as something "hard and fast" the teacher tends to conceive subject matters as something fixed and ready-made, outside the child's experience (Dewey 1938:11).*

Dewey argued that educators need to abandon these notions in favour of a more complex, interactive perspective, one that regards the child and content as "simply two limits which define a single process" (ibid). Dewey's feeling was that teachers should focus much more on students' attempts to understand particular aspects of subject matter. The syllabus develops values, attitudes and skills. Through garment construction and the creation of small samples for their files that serve as teaching aids, students develop appropriate skills and knowledge. They also apply skills and knowledge in order to complete articles into crafts. There is a connection with social and economical aspects. The BETD Needlework syllabus (2001:32) talks about the Socio-Psychological aspects of clothing which are:

- communication value of clothes;
- reasons why people wear clothes;
- message conveyed by clothes.

The above-mentioned points have to do with the social and economic aspect, in which students are expected to plan tasks which reflect cultural awareness and belief. This part of the syllabus seems to integrate social studies e.g. students build "creative expressive communication abilities" which is vital in social relationships.

The syllabus seems to have parts that need to be memorized and conceptual understanding may not take place, e.g. the terminology, while the BETD Broad

Curriculum emphasises conceptual understanding. There is a link in topics but the syllabus seems to have no broader links with other subjects. Most of the topics are to be studied in isolation. As there are few schools that teach this subject, there is no indication of how support from parents and the community at large are to be achieved and how learner-centred education is going to take place. The integration of school life outside the school for learners in this syllabus is very vague especially in the rural remote areas. This might be due to lack of adequate knowledge in the subject to enable the integration of theory and practice.

#### **3.1.4. The preamble, the content and assessment strategies used**

The needlework and clothing syllabus focuses on a learner-centred approach which is also required by the Broad Curriculum of the BETD. Its rationale explains the type of content to be studied in the course and also the competencies that are to be achieved by the participants. The language usage is easy to understand, and there is a specific set of content that is objectives based, which may be assessed. The criteria for subject competencies relate specifically to the stated objectives of the subject. This syllabus seems to have pre-determined/compartmentalised content which is to be assessed. This restricts the student's opportunity to explore more and even to transfer learning between some topics.

According to Stenhouse (cited in Kristensen 2000:3), this curricular approach can be described as "linear programming and teaching by objectives". My conclusion when reading this is, that one is given a tunnel to go through, knowing that if one enters the tunnel from the Western side, there is no exit to North or South. The assessment strategy of the needlework and clothing subject is learner-centred, criterion-referenced and therefore concerned with providing evidence of each student teachers progress. The assessment is on-going and progressive throughout the seven terms of specialisation with the tasks that are set. The preamble, language, epistemology content and competencies of the Needlework and Clothing syllabus are in relation with that of the BETD Broad Curriculum that served as a guideline during the designing of the document.

If successful implementation is the objective in teacher education then it is important to assess the perception of teacher educators and student teachers about the current curriculum and the teacher education programme in general.

### **3.1.5 Student teachers' responses**

Five questions were given to each participant to assess their understanding of the curricular and teacher education. The questions were based on the Broad Curriculum, the Needlework and Clothing syllabus and teacher education.

In answer to the first question which probed their views of the changes in the current curriculum students had the following to say: they all agreed that the BETD Broad Curriculum is different from the previous teacher education programme because of an open door system that invites all people to have access to education. The approaches to teaching and learning are also seen as an improvement. When considering the infrastructure the students recognised is a big improvement compared to the past. All stated that democracy is prevailing in teacher education because of the student-centred approach that allows students to be more involved in the learning teaching situation.

In answer to the questions related to cultural bias, racial discrimination and level of economical status, the student teachers said that there is no restriction to enter BETD course. Whether you are black or white, poor or rich, the course accommodates all people from the four corners of Namibia. According to them this course or open door system is trying to unite Namibian people through the interaction that is taking place during their studies. This gives them opportunities to value different cultural groups and to learn from each other.

The student teachers agreed that the Needlework syllabus does address their needs because it provides guidance about the topics to be covered, activities and competencies. They also said that the syllabus prepares them for their future profession and also for self employment skills.

On the question about content, one student said that the content of Needlework is not enough, although considering that it is relevant, including information from different

books with examples and detailed explanations. Two said that the syllabus content is sufficient, what they are considering as content is all the information that is given in the syllabus. About the challenges facing teacher education, the students had the following to say; Technology is one of the challenges facing teacher education. Computer literacy and other technology skills are changing daily and the speed of change is too fast. The placement or employment opportunities for graduates are becoming more limited thus not all students are employed in their field therefore the capability of the graduates in teaching will be affected because of teaching subjects which are not in their field of specialisation. Other challenges mentioned by student teachers are lack of creativity, commitment, responsibility and language proficiency.

On the last question, all three students said that the Needlework syllabus is based on a learner-centred approach and is gender sensitive. The above answer is based on the following reason expressed thus by one of the students: The syllabus focuses more on the learner not on the teacher because when you go through the syllabus you hear more about learners than teachers. According to them the syllabus gives the impression that the learners do more and the teacher less. They also added to this by saying that more chances are given to the learners to reach objectives through doing and communicating. The student teachers concluded by saying that the Needlework syllabus is gender sensitive because of its consideration of both sexes.

### **3.1.6 The teacher educator's responses. (Question 1-5)**

#### **Democracy**

Teacher educators who responded indicated that the BETD differs from previous teacher education with regard to democracy because of the new teaching approaches that are based on a "democratic pedagogy", a methodology which promotes learning through understanding and practice to shape the condition of one's own life. They also saw it as offering the opportunity to learners to be respected, to be appreciated and be acknowledged through their potential of learning.

## **Access**

They also felt that it is the mission of teacher education to make education accessible to all people especially those that meet the requirements and the barriers that kept most of the Namibian people away from studying are being addressed, e.g. financial and accommodation while studying. The current teacher education recognises the existence of cultural diversity but culture is only viewed as a factor and not an issue because this can not stop different cultural groups to mix in their educational institutions. There is no cultural bias as the education is provided to all learners from different cultural backgrounds of Namibia. However, the BETD is not for everybody but it is tailored to suit the citizens of Namibia. The teacher educators also emphasised that there is no room for racial discrimination in teacher education, and that its mission is to educate Namibians that will avail themselves to teacher education. Despite the fact that the current education does not discriminate different between classes, the economical status still remains as in the past and this is dividing people into different classes.

The teacher educators also stated that the Needlework and clothing syllabus addresses the students' needs by providing them an opportunity to develop knowledge and skills that are relevant to their own lives. Its vocationally based skills can be useful in the classroom and in their daily lives at home.

Concerning the challenges facing BETD the teacher educators pinpointed the following: HIV/AIDS is one of the challenges facing teacher education and is hampering the development of teacher education. Disunity between the colleges and the Ministry of Basic Education is also one of the challenges, especially between the advisory teachers and teacher educators. The lack of networking between the two parties is regarded as making life difficult for both parties. In conclusion all the participants said that the Needlework and Clothing syllabus emphasises learner-centred education that is planned to model the approaches which are constantly building on students' experiences and active participation.

The analyses will help to reveal the context in and for which the curriculum is being designed.

## **3.2 A Socio-historic and economic analysis**

### **3.2.1 The Socio-historic and economic rationale for the education reform**

The pre-independence education was meant to prepare the indigenous people to work for whites. This type of education provided black people with limited skills and was seen by the whites as necessary to enable their servants to respond to their bosses needs effectively by working in their homes. *“For through religious knowledge taught to them and so called good manners, Africans were to become good servants that conform rather than question the existing order”* (Amukugo 1993:60). A segregated education with the aim of “divide and rule” was introduced in Namibia under the colonial rule of South Africa. According to Swarts (in Dahlstrom and Zeichner, 1999:30) “the provision of teacher education was based upon the establishment of ethnically organised homelands.” Teacher education was also placed under the responsibility of ethnic groups to prepare their own teachers with limited resources that could not sustain quality education. According to Amukugo cited by Dahlstrom and Zeichner (1999:30) economic constraints were utilized as part of the strategy to reproduce the old society in a new guise.

The content taught to teachers was irrelevant and was examination driven. Cohen (1994:201) confirmed that the education system in terms of standard, structure, content and the requirement was virtually all South African based.

### **3.2.2 The origin of the Namibian curriculum**

Due to the oppressive apartheid system, Namibians who were fortunate to realise the consequences of the education offered to black people that time, left Namibia, then South West Africa, and joined the liberation struggle with the intention of fighting or to educate themselves hoping to see Namibia as an independent country one day.

According to Dahlstrom (1999:50) Namibians had left their country and repressive apartheid system to join the liberation struggle and fight at the front or to educate themselves for the country’s envisaged independence through scholarship, studying

somewhere far away from war in Angola and Namibia. While in exile the Namibian children were taught under trees, tents and in the bush by untrained teachers.

Due to classroom practises that were seen to be similar to that of the Namibian situation, a change in teacher training was critical. *“There were approximately fifty classrooms in Kwanza, the classroom practises did not differ much from the well known arrangements in Namibian schools at that time”* (Dahlstrom and Zeichner 1999:50).

According to Dahlstrom and Zeichner (1999:51) the Integrated Teacher Training programme curriculum was developed as a guide document by a joint committee of Namibia and Swedish educators. This program operated as an innovative pilot program from 1986 to 1992 the last year of Namibia exile and the year after independence. From this programme that was initiated in exile our current teacher education BETD was born. The programme was meant to replace the “dogmatic” practises in a classroom situation.

### **3.2.3 The changes since independence**

After the independence of Namibia, education was prioritized to combat inequality, discrimination, segregation or racial practises. Education for all at that time was seen as a solution to end the 20<sup>th</sup> century oppressive education. *“The majority saw education for all as a vehicle for ending and then overcoming the segregation and inequalities of the past”* (M.E.C. 1993:29). Education for all defeated the philosophy that was able to educate only the privileged (elite) citizens. Education became a right to all Namibians “articles 20 of the Namibian Constitution”. The Namibian Government was dedicated and committed to transform the legacy of the previous system aiming at the four educational goals, access, equity, quality and democracy. *“The Ministry of Education and Culture will assign to four major goals and those activities essential to reaching them”* (M.E.C 1993:32).

This change started with the unification of basic education to enable every Namibian to have ten years of education. The majority of the employed teachers were unqualified or under qualified, which necessitated the new teacher education program (BETD) to equip graduates at the colleges to teach Grade 1-10.

This teacher education was meant to be universal in all four colleges, Windhoek, Ongwediva, Rundu and Caprivi to respond to the call of Basic Education Swarts in Dahlstrom et al (2000:9) says that the BETD programme is a professional course of study related directly to and responsive to the needs, demands and challenges of Basic Education.

To point out some changes of the reform that are seen differently by Namibia due to a lack of unified understanding or vision, Swarts in Dahlstrom et al (2000:9) pointed out some changes to teacher training (Pre-independence) which is an attempt to demonstrate the departure from pure knowledge and skill based development to the paradigm shift that has occurred. Teacher education, according to her, is deemed to be concerned with all round education and development of teachers, emphasising teaching as a profession involving well informed judgements, while teacher training refers to a more mechanistic approach to teaching and preparation emphasising craft apprenticeship involving the mastery of well defined routines. Some changes include the move away from approach that placed the learners or students in a position of not knowing something being seen as empty “vessels” to be filled by teachers with knowledge to the current learner centred approach that calls in the learner’s pre-knowledge, skills, values and attitude as starting point of the teaching/learning situation. *“Learner centred education presupposes that teachers have a holistic view of the learner, valuing the learners’ life experience as a starting point for their studies”* (M.E.C 1993:88).

Classroom management is viewed as the way teachers use resources in the classroom such as materials, organisation and administration of activities, the teacher’s behaviour, the learners’ behaviour and how a teacher ensures order in the classroom has also changed. The use of a text book as the only useful resource was highly valued which presently is not encouraged but the use of different resources that are relevant to learners needs such as resource books, posters, artefacts, concrete materials; are being emphasised in teacher education. The use of activities set by other people during evaluation is also being discouraged and student teachers are being equipped with knowledge and skills of how to design their own activities or worksheets for evaluation purposes. This goes to the extent of getting them to prepare their own schemes of work

and not to use one developed by a subject advisor as done previously. Corporal punishment which was seen as the only way in which a learner can be forced to learn is seen today as a crime and student teachers at colleges are encouraged not to use negative punishment that might develop fear in learners. *"The Namibian Educational Conduct for schools strictly prohibits this behaviour when it stated, corporal punishment may not be administered as cited by Janeen Carrigan in the reform forum"* (March 2000:6).

Assessment and evaluation as a form of examination regarded previously as the only measure of success, was also changed. Previously the classroom activities were examination driven whereby individual learners were expected to prove how well they were able to give back the knowledge they were taught by teachers in norm referenced examinations.

*"With the reform a study was done and has found that examination and assessment procedures do not serve well our educational objectives". This emphasis on failure is endemic through the education system with students expecting to fail, teachers expecting them to fail and examiners setting papers to ensure that large number do fail. If this situation is to be reversed and the emphasis placed on positive achievement then a great effort will need to be made to re-educate all concerned. The assessment and evaluation is now criterion referenced based, its focus is more on the individual, on his/her unique learning and individual growth which is assessed against a "Criteria" as stated in the (Reform Forum March 1995:12). "The main purpose of assessment will be to develop a reliable picture of each individual learner's progress and level of achievement in relation to minimum competencies specified in subject syllabuses. The different practises usually reflect different ideology commitments, and one of the salient features of the movement has been the recognition of assessment as part of education, must be about promoting learning and opportunities, rather than sorting people into social roles of society" (M.E.C 1993:128).*

Having experienced teacher education in the past, I am witnessing changes in many spheres of the post independence education. Colleges are open to all Namibians from diverse ethnic groups and cultural backgrounds. Life-long education and research is being encouraged at college level. Parents of the learners and the society at large have

a say in the college endeavours. The college council committee includes three members who are community representatives to be their ears and eyes at the college and also to take up their concerns and give them feedback.

Reflecting on the changes that have taken place, it is also important to realise that all the ideologies have strengths and weaknesses.

### **Analysis of the learning environment**

#### **3.2.4 Rundu College of Education**

The college accommodates 360 students both males and females. Only 280 students are accommodated in the hostel due to limited spaces. The hostel is equipped with the basic requirements to enable students to live comfortably while striving to become leaders and teachers of tomorrow. It is vital that the basic needs of students are to be satisfied if progress in education is to be achieved.

Rundu College is the smallest institution among all educational colleges in Namibia and also less developed in terms of facilities, resources and amenities. There are fewer lecture rooms which makes life difficult for lecturers not having a fixed place for teaching/learning. This creates confusion and some lecturers spend part of their periods outside looking for an open room. Therefore time management becomes a problem and it is always obvious that the planned work for that specific period can't be finished. This promotes the problem of late coming among teacher educators and students because of the overlapping of periods. Each time there is a delay, teacher educators and students have to wait for the group in the lecture room to vacate the place before their period is to start.

There is a library which is supposed to be the reference point of the community at large to consult whenever questions and doubts arise, or for self enrichment. However, the library does not provide enough relevant resources such as books and journals. Most of the books are based on Western life styles and provide examples that are relevant to their societies.

In most instances the books found in our library are outdated and the information they provide is limited. It is important to have enough materials and resources that are up-to-date due to the fact that today's education is about exploring and reasoning about the given information or available to enable us to have relevant knowledge that is applicable to our societies. Rundu College of Education as an institution still needs to be advanced when it comes to relevant resources which will enable us to develop conceptual knowledge.

*'The purpose of education ought to develop conceptual knowledge that allows our learners to function in their society and in their chosen areas of work. The more advanced a society the more extensive is the conceptual knowledge needed to function effectively'* (Van Harmelen 2000:8).

In fact our institution has adequate computers that are only used for typing purposes and for playing games. Only one computer is connected to the Internet and that is the Rector's computer, so teacher educators and students have no access to the internet or e-mail facilities. The environment is not conducive enough to advanced technology to enable the community at large to explore more about knowledge that will stimulate their thinking to create own ideas and construct knowledge as required by the constructivist approach that governs the Namibian educational system. According to Van Harmelen (2000:4) knowledge is constructed by people who are dependent on what is available to them at a particular time and in a particular place. Equally how knowledge is constructed depends on the values and attitudes of a particular society at the time of its construction. I strongly believe that knowledge construction is vital, rather than following other people's recipes, this is due to the fact that youth and societies of today are striving to change their values and attitudes to suit the rapidly changing world and its knowledge to enhance social interaction at home and globally.

Lack of photocopy machines is also a stumbling block in our institution. There is only one machine that operates for the whole College and caters for the needs of the community. The machine only stays in operation for three to four weeks; its repair takes up to two weeks again which is due to the service man that has to come from another town. During this waiting period for the machines to be repaired, summaries are written on the chalkboard and some colleagues who are fortunate to have their own transport make the effort to do photocopies at the Regional Offices in town, which

takes 20-30 minutes of waiting due to the many people who make use of the facilities. Despite these constraints the teaching/learning situation is going on in a satisfactory manner.

### **3.3.2. The teaching and learning strategies at Rundu College of Education**

Our focus in the teaching/learning is to prepare student teachers who will value their learners' existing knowledge, interests, skills, understanding, attitudes and even their cultural differences or gender. To make use of the above-mentioned as a starting point a favourable learning environment for the learners is to be considered. The teaching and learning strategies that are used are based on the view point of the BETD broad curriculum, with exception of few situations where lecturers are still glued to the old philosophy of teacher-centred education; this might be the result of the educational background of the lecturers at the College and their fear for change. According to the broad curriculum BETD (November 1997:15) "teaching and learning continually build on the child's experience and active participation, aiming to make learning relevant and meaningful to the child."

Teaching is based on learner-centred principles that view knowledge as not being a static amount of content, but what, learners actively construct and create from experience and being in contact with their micro and macro environment.

The students are also encouraged to develop theoretical as well as practical knowledge and their creativity is emphasised. There are a variety of teaching strategies e.g. through micro teaching, observations, demonstration, team teaching, peer teaching, tutorials and lecturing. The teaching and learning at the educational college focuses more on the methodology as how knowledge, skill values, attitude, is to be taught. The ethics of a teacher that makes him/her to be good, as well as attitudes, behaviours and manners are also looked at. Marry Warnock as cited by (McClelland 1996:7) wrote: ... *society at large should not forget that it was for people in society that education existed. In order to fulfil their wants and aspirations, she argued, the teacher is responsible not only for the child's learning, what is contained in the curriculum but also in part for his learning to behave well, to become morally good.*

The teacher educator is to ensure a favourable teaching/learning atmosphere. According to McClelland (1996:4) the teacher educators are seen as the foundation stone up which all other developments must rest.

#### 4. Synthesis

Linking all together I would like to reflect on the findings as follows: The Needlework and Clothing syllabus format reflects a fully learner-centred education because of its competencies that mostly talk about learners as a starting point for the teaching/learning activities. In reality when putting this theory into practise one finds it more difficult to implement the prescribed approach. The syllabus promotes constructivist but also empiricist at some parts. I think and believe that this is due to the fact that constructivist theory is developed based on the criticisms and weaknesses of the empirical theory, the modification of this syllabus is still to be made if constructivist epistemology is to be reflected in the syllabus and by so doing a wide variety of possibilities that will enable us to gain ability to identify and solve problems in our daily life. Our changing world requires a day by day modification of knowledge rather than holding onto the out dated theories that do not make sense to the global societies. Van Harmelen (2000:8) states:

*... this view of learning accepts that learning is a process through which we seek to make meaning and to make sense in and for our world. The meaning we make of and our shared understanding of the world and our lives is that which constitutes knowledge. To know is to understand.*

Both teacher educators and student teachers seem to have less knowledge and conceptual understanding about the constructivist approach than the preamble in which the Namibian education is supposed to operate. Both participants in this study could not elaborate more on the questions asked. This may create questions or doubts whether teacher education is producing well-equipped teachers, who understand and are able to implement changes or if we are only reproducing teachers to revive the colonial philosophy that ignores the existing prior knowledge of learners. Lack of understanding of the broad curriculum will hinder both student teacher and teacher educator to acquire and apply the information and it is misleading not to reach the intended goals for National Education. According to Leary cited in McClelland (1996:6) the most teachers have to think about the future for the children, when their education is over. In essence

education can thus be defined as the application philosophy of life to the upbringing of children.

The student teachers at Rundu College of Education are from all four corners of Namibia with different education backgrounds, cultures and social life experiences. Their reasoning and language usage is different, whether our students are ready for the teaching mission after the completion of the course is still not clear.

Rundu College of Education as seen from outside is a big and beautiful place, but whether the picture that is visible to the people is also seen in its resources is really vague to the outsiders. After the analysis of the environment it became clear to me that the institution is not technologically well equipped compared to some other institutions. Some of the existing faculties, equipment and resources are not utilised for their purpose e.g. Language Centre, Educational Development Unity , the laundry equipped with all time saving apparatus, most books in the library are still in boxes since year 2000 to mention but a few. Is our mission of educating across curriculum not hindered by some of these factors? Language proficiency, cleanliness and a culture of reading are some of the skills our student teachers need to develop.

## **5. Conclusion**

In conclusion, much was done to reform the Namibian system but still much is to be done in order to equip all educational stakeholders with the relevant knowledge. The understanding of the Broad Curriculum as well as the learner-centred approach as methodology needs a better explanation among student teachers and teacher educators.

The changes that occurred since Namibia's independence are seen all over and it provoked the situation because Namibians themselves have realised that knowledge is changing day-by-day, thus the curriculum reform is not and will not be a finished business.

However the minds of the educational stakeholders need to be decolonised, to enable them to see the link between curriculum implementation and appropriate learning

environment that has appropriate facilities and resources. If this is done, much more changes will occur compared to the present situation.

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# **Epistemology Research**

## ***Abstract***

*The major focus in this paper is on the epistemology of behaviourism and constructivism. In this regard, books, handouts and encyclopaedias are to be utilised for the success of the paper. It is vital to widen the understanding of the two epistemologies looking at their theories of knowledge, strengths and weaknesses. The said two epistemologies play an important role in educational systems world wide in order to achieve goals and objectives of individuals, societies and the world at large. Goals and objectives might be equated with philosophies of education because both might strive to achieve intended plans. However, the two epistemologies view knowledge in different ways which is to be revealed later.*

## **1. Introduction**

Since the guidelines do not provide the structure of the end result, the paper first discusses behaviourist roots based on materialism, realism and empiricism. Thereafter, the weaknesses and strengths of the said epistemology are going to be discussed. Secondly, constructivism based on radical, social and critical approaches will be discussed, also ending with its strengths and weaknesses. This writing will also be synthesised to draw possible conclusions. Some essential concepts are to be defined for clarity sake and for the sake of knowledge that underpins education. Thus according to Van Harmelen (2000:3) knowledge is to know something. She also says that when we have a conceptual understanding, we can say we know and it is made up of many layers like that of an onion. Philosophy helps us understand who we are, where we are and to some extent where we are going. In the popular sense of the word according to Aspin (1995), philosophy is used to characterise a person or a group of people's attitude to life. This term is derived from a Greek word that means "the love of wisdom or knowledge" (Bahr, L.S., Bloomfield, L.A. & Johnston, B. 199:701). The conclusion of the writing will sum up the paper, pointing out some core ideas concerning the two epistemologies.

## 2. Behaviourism

The term behaviourism is “both ambiguous and conceptually complex, so much so that to define it as a single theory is impossible. Behaviourism is perceived as a network of theoretical perspectives held together by the common belief that personal experience is understood and exhibited as behaviour or action that result from interaction with our physical and social environment” (Van Harmelen 1995:51).

According to O’Neill, cited in Van Harmelen (1995:51), the behavioural theories fall broadly within the ambit of empirical philosophies that ‘holds that all knowledge is personal knowledge and that knowledge is necessarily evident and grounded in sense perceptual encounters with particular object and events.’

Watson (1878-1958) is the founder of the study of behaviour who took the position, then radical, that psychologists should devote themselves exclusively to studying behaviour, rather than the mind or mental activity of organisms (Bahr, L.S., Bloomfield, L.A. & Johnston, B. 1997:2). Ozman and Craver (1986) also stated that behaviourism is normally classified as psychological theory, a more specialized and less comprehensive theory than systematic philosophy. Skinner and Watson believed that human behaviour could and should only be described according to the same scientific principle used in science and also that learning is a human behaviour because they believed that behaviour is learned (Bahr, L.S., Bloomfield, L.A. & Johnston, B. 1997:2).

Van Harmelen (2000:10) says that the central idea about knowledge in behaviourism is that it is believed to exist externally to the human’s mind in other words humans have to discover what is already there. When knowledge is discovered this way, it becomes truth and when remembering facts, one claims to have knowledge. She concludes that knowledge according to behaviourists to be called such must have a cause/effect relationship. This means there is a cause/effect behind each event and nothing happens without it. However, behaviourists believe that science is the only answer to all problems in life and only external behaviour can be successfully verified.

## **2.1. Materialism**

Materialism is a “philosophical doctrine according to which all manifestations of life and mind arise, develop and cease according to changes in the organization of matter” (Bahr, Bloomfield and Johnston, B. 1997:540). All forms of materialism deny the existence of disembodied consciousness or spirit. There is also a denial of immortality of the soul, the existence of God and the rule of Providence, as these subjects of Metaphysics are usually conceived. A physical person is taken into account but the inner person, which is the mind, consciousness and soul is disregarded. According to Ozman and Craver (1986:166), the body is material and behaviour is motion and thus human can be known from a standpoint of matter and motion. Thomas Hobbes cited in Ozman and Craver (1986:166) also stated that life is motion and one can say that a machine has life. Due to this statement, man is viewed as a machine which is dehumanising of a person. In this view, a human being is equated to a machine that does not have conscious or brain. Pavlov (1849-1936) cited in Ozman and Craver (1986:166) the father of conditioning theory believed that response is not based on something mental going on inside but the response is made on the bases of conditioning that can be explained by external circumstances.

Watson cited in Ozman and Craver (1986:166) believed that the fears people have are conditioned responses to the environment. In other words fear is caused by something outside and nothing is to develop within and thought that environment is the primary shaper of behaviour. He also maintained that if he could control a child’s environment, he could engineer that child into any kind of a person desired. He also thought that the brain is only part of the nervous systems and not the seat of mind or conscious. Consciousness does exist and it can’t be equated to a soul as Wundt cited in Ozman and Craver (1986:184) a psychologist substituted the term consciousness for the term soul.

## **2.2. Realism**

The development of realism as a philosophy is linked to Aristotle as another traditional school of thought but has been reformulated and reinterpreted over years.

According to Aspin (1995:137-188), this philosophy is important, its principle is in the realistic metaphysics, matter or object which we see exist absolutely. They believe that the world exists by itself and is a reality. They argue that for a person to claim that he knows an object it must have existed prior to his knowing it. If there is no existence of an object then there is nothing for the mind to know. Hence they concluded that objects have a reality independent of our knowledge or our desire to know them.

The other two principles under this epistemology are the law and order and the world that is real. What science tells us about it is the truth, in other words the basic facts discovered by sciences about the world are indeed true and real. Hence what our common sense tells us to be the case is true knowledge and it is true if it correspond to what we later find to be the case.

### **2.3. Empiricism**

According to Aspin (1995:21), empiricism is defined in a shorter Oxford English Dictionary 1972 as the theory that regards experiences as the only source of knowledge. This is the type of knowledge that we obtain through observation of the things around us, through our senses, and through personal experiences from actions in which we are involved. It is also the characteristic knowledge in the sciences, both natural and social. It is an empirical type of knowledge which means that it can be verified for its truth at least by those who have the expertise to do so.

Locke in Aspin (1995:24) averred that the mind is like an empty cupboard or blank sheet of paper, void of all characters, without any ideas. He maintained that the mind has no innate ideas or principles. This has much in common with the thinking of Thomas Aquinas cited in Aspin (1995:24) who had previously asserted that there is nothing in the mind which has not previously been in sensation. He describes the state of mind at birth as a blank sheet on which nothing is written.

## **2.4.Strengths and weaknesses of behaviourism**

In this part strengths of behaviourism will be discussed first then followed by its weaknesses. This philosophy can focus the learners on a clear goal and they can respond automatically to the cues of that goal. It can effectively facilitate mastery of the content of a profession (knowledge what) and it provides clear directions of how to achieve the indeed objectives. Behaviourism formed a foundation philosophy on which others have to modify. Teyler cited in Van Harmelen (1995:52) suggested that the real purpose of education is to bring about significant change in the students pattern of behaviour. The notion of high and low skills is still relevant today and many contemporary learning experiences are based on it.

According to Van Harmelen (1995:53), the flows in behavioural epistemology have served this notion of high and low order skills. Some aspects of behaviourism that are viewed as weaknesses and are being criticized up to today are as follow: joy, feelings, intentions and choice as nothing more than guesswork and speculation because they can not be empirically observed and measured. The right answer notion that encouraged rote learning is also a weakness in this philosophy as well as the notion of science to be the only answer to all problems, which is impossible to have only one answer to all problems of the world. These weaknesses initiated a new philosophy (constructivism) intending to improve the discussed philosophy (behaviourism).

## **3. Constructivism**

The philosophical roots of constructivism antedate modern learning psychology. “It provides an alternative epistemological base to the objectivist tradition. Constructivism, like objectivism, holds that there is a real world that we experience. However, the argument is that meaning is imposed on the world by us. There are many ways to structure the world, and there are many meanings or perspectives for any event or concept, thus there is no correct meaning that we are striving for” (Duffy and Jonassen 1992:3).

According to Bodner (1986:873), constructivism is based on the principle that knowledge is constructed in the mind of the learner. Piaget also argued that knowledge is constructed as the learners strive to organise his or her experiences in terms of pre-existing mental structures or schemes. Von Glasersfeld cited in Bodner (1986:874) has repeatedly described the construction of knowledge as a search for a fit rather than a match with reality. In the constructivist model knowledge is assumed to fit reality the way the key fits the lock. This model is also described by Bodner as an instrumentalist view of knowledge, and knowledge is good if and when it works, if and when it allows us to achieve our goals.

Although the constructivist's perspective has been traced back to the writing of Giambattista Vico in (1710:1-3), Piaget was the first constructivist in the sense that his view, that knowledge is constructed in the mind of the learner was based on research on how children acquire knowledge (Bodner 1986:873).

Spiro et al cited in Duffy and Jonassen (1992:64) argue that conceptual complexities and across-case inconsistencies in ill-structured knowledge domains often render the employment of pre-packaged (pre-compiled) schemes inadequate and inappropriate. Rather, because knowledge will have to be used in too many different ways, the emphasis must be shifted from retrieval of intact knowledge structure to understanding. According to them, this new constructivism is doubly constructive, understandings are constructed by using prior knowledge to go beyond the information given, and the prior knowledge that is brought to bear is itself constructed, rather than retrieved intact from memory.

Retrieval of knowledge can be a danger and not reliable because when the cognising system fails to recall the information, an individual might be disappointed. However, space and time is linked to construction of knowledge and thus it is seen to be a contested theory of knowledge.

### **3.1. Social constructivism**

Social constructivism is perhaps "the newest form of constructivism which regards individual subjects and the realm of social as indissolubly interconnected. Its concern

is with the underlying metaphor under social constructivism is that of conversation, comprising persons in meaningful linguistic and extra-linguistic interaction” (Enerst 1993:2).

According to Bishop cited in Enerst (1993:2), the mind is seen as part of the broader context, the social construction of meaning. Berger and Luckmann cited in Taylor and Campbell-Williams (1993:12) states that knowledge is also constructed intersubjectively, that is socially negotiated between significant others. The above principle explains how independent cognising beings can hold highly compatible meanings and social perspectives.

However, Von Glasersfeld cited in Taylor and Campbell-Williams (1993:12) stresses that the principle of social constructivism extends the epistemology beyond the individual’s construction of subjective knowledge, acknowledges the central role of language in knowledge construction.

### **3.2. Radical constructivism**

This principle views knowledge as the cognitive activity of making sense of experience. Knowledge therefore is inescapably subjective. This principle proposes that the individual learner’s purposeful and subjective interpretations of his/her experiences of the physical and social world constitute the genesis of the individual’s knowledge. This knowledge results from the process of making sense of experience. It is individual constructed knowledge that remains viable for as long as it enables the individual to make sense successfully (Taylor 1993:11).

### **3.3. Critical Constructivism**

Critical constructivism underpins much of the professional practice of modern education, and it prefigures teacher’s curriculum interests. Habermas’ idea of knowledge constitutive interests provides a backdrop to his powerful notation of communicative action. For Habermas, human cognitive interests constitute forms of knowledge that arise out of the actions of speech. He contends that, although it is

realized rarely, everyday speech is oriented towards achieving the ideal of a genuine consensus through discourse (Taylor and Campbell-Williams 1993:14).

According to Habermas (1972) cited in Taylor and Campbell-Williams (1993:14) “postulates that the attainment of genuine consensus among participants in a discourse requires that an ideal speech situation should be marked by conditions such as constraints, lack of time, unimpaired self-representation and free of coercion such as bullying. It means that the participants has enough to find out about the truth through arguments to reach consensus, all are willing and free to disclose their true intentions and motives. They also give each other equal opportunity to express themselves.

Lastly, they are willing to accept responsibility for own actions and they may expect the same of others. This type of knowledge is a form of social reasoning that embodies a moral concern for the right of the individual to remain free from coercive and distorting influences while participating with others in a discourse that aims to attain genuine consensus (Habermas 1984, 1987), this notion of Habermas leads to the attainment of open and critical discourse.” (Taylor and Campbell-Williams 1993:15).

### **3.4.Strength and weaknesses of constructivism**

Constructivism encourages conceptual understanding and knowledge is defined both by the objects of experience and by categories and concept that the knowing subject brings to every act of thought and perception. Knowledge is not passively received either through the senses or by way of communication, but actively built up by cognising subject Von Glaserfeld (1989:182) cited in (Bodner 1986:874).

In the constructivist model “ knowledge is assumed to fit reality the way the key fits the lock; knowledge is good if and when it allows us to achieve our goals. This type of knowledge is both built and continually tested; it is viable when it passes the test” Von Glasersfeld in (Bodner 1986:874).

Individuals are not only constructing their own knowledge based on pre-existing cognitive structure or schemes but in fact also seen to construct very different world in which to live.

Although constructivism is seen to be the dominant theory of knowledge, it still has some weaknesses. Radical constructivism leads to the following weaknesses due to its emphasis on individualistic Ernest (1993:4).

The cognizing subject appears to be near-hermetically sealed (tight closed) in a private constructed experiential world of own, this can lead to an overly child, romantic progressivism, which is over shielding the children from social influence, from nasty realities of the world Walkerdine (1984) in (Ernest 1993:4).

According to Mellin-Olsen cited in (Ernest 1993:4), “by being based on the underlying evolutionary metaphor for the mind, there is a danger that interpersonal relations are seen as nothing but competitive, a version of the law of the jungle or another way of phrasing the survival of the fit. A child is to discover on its own without any expressions of its individual creativity, this is a discovery learning which is bound up with a romanticism that is not productive at all.” He further argued that there is a need to let learners construct their own meaning, the teacher and peers must interact with learners to negotiate a passage towards social accepted knowledge.

#### **4. Synthesis**

The two theories, behaviourism and constructivism seem to inform one another. Behaviourism being the foundation while constructivism seems to be a different version based on the criticisms made on behaviourism.

According to Gergen (1985:1), the roots of constructivist thought may be traced to long standing debates between empiricist and rationalist schools of thought. Constructivism attempts to move beyond the dualism to which both of these traditions are committed and to place knowledge within the process of social interchange.

As the world is modifying all social practices, also the theories of knowledge that underpin the practice of behaviourism need to go through the same direction to avoid more criticisms.

Behaviourism view knowledge as something that exists outside a human body and also that experienced knowledge is the only true knowledge. There is a denial of an inner person under behaviourists, the mind; consciousness and soul are seen as old things of prescientific age.

The other belief under behaviourism is, all answer lies in science. I don't agree with this theory, I think it is being very selfish and too narrow minded to believe in such theory of knowledge that seems to cut off all other existing theories of knowledge.

If behaviourists claim that the mind is only a black box and nothing is going on, how can someone try to make meaning about something if one can't link thinking to the experiences that enable new ideas. If this was the case, life could be too boring because of waiting for something to happen before one could know something. Our consciousness plays a big role in accommodating knowledge that is seen to be acceptable. Thus, the inner person is stronger than the physical person because the senses are only performing duties based on the inner person's demands.

Although much explanations was done by behaviourists, constructivism as a theory of knowledge appears to be the best epistemology at this point and time but it can still be contested in order to bring in changes. Van Harmelen (2000:7) "*Knowledge is contested, provisional and changing, this means that knowledge is not seen as unchanging truths, but as something that is being reformed as we gain greater understanding of and insight into our world.*"

## **5. Conclusion**

Moving from the known to the unknown brings in a lot of preferences of the past and doubts about the future because of not knowing where we are heading to. The certainty of the known makes it difficult for someone to accept the unknown.

Both behaviourism and constructivism theory got their weaknesses and strengths that can be good or bad to different people depending on time and a place where one finds your self in. Constructivism is seen as the dominant theory of knowledge at this point and time because of the reform processes that is taking place. In addition to this, the

globalisation that initiated the “World declaration on education for all” (Jomtien, 1990) in Van Harmelen (2000:3) has also contributed to the acceptance of this theory of knowledge. However, the move that is taking place is not to be seen as a complete change yet, because of holding still to the pillars of behaviourism.

In conclusion, constructivism as a theory of knowledge seems to be fairer in terms of access and quality of knowledge. Scientific knowledge is not the only valuable knowledge but knowledge can be constructed in many ways, such as through the use of language, socialisation and individual cognition.

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# **Literature Review**

# **An interpretative case study as means to enhance practice in home Science at Rundu College of Education**

## **1. Introduction**

This review concentrates on the theory which informs the study that intends to explore the contradiction between how Home Science teachers teach the selected life skills and how they live it out. The research will focus on the following; home management and environmental care, the nutritive feeding and health hazards of children aged from birth to five years old. The main aim of the research is to find out how Home Science teachers contradict what they teach in their daily living and to investigate why this is happening if the teachers are equipped with the relevant skills and knowledge. This paper starts with Home Science as a medium for change, followed by teacher education for change, teaching for understanding and ends with the teaching skills and theories that guide practice for change.

Home Science is a very important subject which caters for the needs of all people of different age groups, sex and even ethnic groups. The subject is vital to the Namibian Nation to bring about change in the societies. It is clearly stated in the rationale of BETD Home Science Syllabus (March 2001:2) that the subject develops the capabilities and skills of people, enables them to make their own contribution to the improvement of their quality of life and the quality of those around them. The teacher's guide in teaching Home Ecology, which is the same subject as Home Science (it is only the naming that differs at different levels e.g. Primary and Secondary schools), states that the subject allows learners to tie together work and family, because skills and knowledge required in the home and workplace overlap so that practical living skills employed at home can be further developed for use in an occupation outside the home. It further states that the subject empowers the individual to make life choices based on interests and aptitudes, rather than on tradition and gender. Gender equity is an essential step on the road to the better future. The subject also stimulates creativity and problem solving skills (Keyter and Jordaan 2000:1). Home Science education has moved from domestication and focuses on the development and professionalisation of the teacher as a person who has commitment and sense of responsibility, plus the knowledge and

skills to raise the quality of the life and education in the entire country. The subject teaches that the family is the backbone of the society and it also helps to empower the family with necessary skills and knowledge concerning life skills. The latter statement adds more weight to the subject because each and every one belongs and comes from a family and the first skills and knowledge which a child obtains come from his/her family, thus, the subject is vital for the good socialising and home management skills. This subject contributes to the reform process of the education of empowering and equipping community workers and teachers to use it as a tool by involving the community in education.

The subject changed radically because of the paradigm shift and other changes that took place. It does not discriminate between male and female, its new curriculum differs much from the old one. Some irrelevant content was removed from it and the teaching methods or subject approaches are different from the old one, in the sense that the old teaching method was teacher-centred while the new one is learner-centred. It is stated in the BETD syllabus that the learner-centred approach views knowledge not as a static amount of content, but is what learners actively construct from experience and interaction within the socio-cultural context, while the old syllabus didn't value the learners pre-knowledge (BETD Home Ecology Syllabus, March 2001:2).

A further comparison of the old and the new syllabus is that the old one is too prescriptive and even giving the number of periods per concept which did not allow the teachers to consider quality in their teaching but rather try to compete with time. The text books to be used by the learners and teachers were also prescribed in the syllabus and there was no freedom in exploring other books, to compare and apply the content, while the new syllabus provides freedom to both teachers and learners to use different text books in the libraries to expand and apply their knowledge.

However the new paradigm brought about change that encourages both teachers and learners to engage in problem solving process, experiments, research projects, practical work including the use of different text books in different libraries to show progress in Home Science as the medium of change and the entire education.

## **2. Home Ecology/Science as medium for change**

As part of the Namibian Educational process, the previous Domestic Science syllabus was reviewed and the new curriculum came to be called Home Ecology at junior secondary school level and Home Science at senior secondary level. The key aim of this subject is the developmental aim, which seeks to improve the lives of people. Keyter and Jordan (2000:1) clearly state that the subject aims to improve the quality of individual and family life through the development of positive attitudes, knowledge and skills.

Home Ecology education can make a change in our Namibian society because of the many challenges that are facing our country that contribute to the destruction of our nation. Some of the challenges the subject can address include HIV/Aids, poor malnutrition, child care and development, health hazards among children and home management, which involves very important sections such as: caring of homes, resource management, conflict management and many more.

Contextualising Home Science education in Namibia can help to minimize the above mentioned challenges that disturb the development of the country. The subject is able to provide skills and knowledge about nutritional needs of sick people, children, adults as well as elderly people. This pre-vocational subject is defined as the study of the interaction between humans and their environment and how humans manage their resources (Keyter and Jordan 2000:1).

As part of the paradigm shift, the subject guides the teachers in the reform of a national subject policy in order to administer the subject at schools. The policy encourages the use of a variety of teaching styles under the learner-centred approach. The teacher is expected to give enough time to learners to take in new ideas and practice new skills, and not to continue with a new step until they are ready to do so. The subject policy aims at several important points that are vital for effective teaching and it provides guide lines for the correct involvement of learners in teaching/learning process. It is not possible for a child to understand the ideas and concept embedded in each subject unaided, for he/she does not possess the skills to do so (May cited in Wilmot 2003:40).

However, the subject policy emphasises the importance of the teacher in the teaching of this subject in order to bring about change, “a teacher is seen to be a leader and a facilitator because he/she is to lead the learners to discover and understand concepts and new materials themselves. This method is believed to put a very stressful demand on the teacher but it is an indisputable fact that the learners who discover and understand new concept themselves will not easily forget such knowledge” (Home Science Policy 2000:14-15).

The Home Science Policy expects the teacher to be the classroom manager and to ensure that conditions are favourable for effective learning and teaching. The teacher should also meet all the necessary requirements of the curriculum and syllabus. To create a teaching-learning situation both inside and outside the classroom in order for the learners to acquire the necessary skills and knowledge is one of the expectations of the teacher that are stated in the subject policy. Assisting and equipping the learners in obtaining the necessary skills for job orientation is one of the points emphasised as it is one of the major objectives of the subject. The next step is to look into some of the important areas and the changes the subject can make in those areas (Home management, environment care, nutritive feeding and the health of children from birth to five).

### **2.1. Home management and environment care**

The management and care of the environment is one of the very important aspects that are looked at in Home Ecology, due to its importance of ensuring a healthy family that is able to contribute to the development of the society. According to De Viliers et al (1987:16) the environment will undoubtedly have an influence on the family and overall organisation in the home. The household management has gone through many stages as lifestyles have changed. The most recent change is that, with the rise of feminism, traditional gender roles have been challenged and men are playing an increasing part in running the home.

However, the review of the curriculum has encouraged girls, boys, men and women to share the household tasks in many houses. It is stated that household management differ from family to family and will depend on the following: the ages and lifestyles of different members of the family, their ability to organise and carry out tasks, the environment in which they live, the values of the family, the available money and other resources, the social status of the family, whether one or both parents work and specific problems the family might encounter (De Viliers et al 1987:16).

In any home management, skills and knowledge are needed for planning and organising various household tasks. It is important for any family type to keep their environment clean for the hygienic reasons. According to De Viliers et al (1987:19) the general aim of cleaning is to keep the environment inside and outside the house clean and well maintained. Keyter and Jordan (2000:7) emphasise that no matter how clean we think our environment is, there are always germs and bacteria in our soil, water and air. Thus to reduce the risk of food poisoning, it is important to follow the basic rules of good hygiene.

## **2.1. Nutritive feeding and the health of children from birth to five years**

Nutrients are the parts of food that our bodies use to build tissues, produce energy and to keep us healthy (King and Burgess 1972:2). The knowledge of food and nutrients is important for all families in order to bring up their children. It is important that different families are to be equipped with the relevant knowledge and skills that will enable them to raise their children from birth to five years which is a very important stage in the development of a child.

According to King and Burgess (1972:91-92), the best food for babies is breast milk. No other milk is as good as breast milk; breast milk is all that a baby needs for at least the first four months of life. Many babies need nothing but breast milk for six months. Breast milk continues to be the main source of nutrients for several more months, and can provide one third or more of the nutrients that a child needs up to the age of two

years. Why breast milk is the perfect food for babies is that it contains all the nutrients that a baby needs which almost if not always in the right amounts. They further stated that artificial milk (formula), other tinned milks and animal milk do not contain the right amounts of all the nutrients. Scientists keep on discovering new differences between breast milk and animal milk. Manufacturers keep changing their formulae, but they can never make any identical product. They concluded by saying that the nutrients in breast milk can be more easily digested and absorbed than the nutrients in artificial milk, and they are more efficiently used by the baby's body.

According to Boerman et al (1993:15), it is shown that nearly all babies are breastfed (95%), but only 52% are put to the breast immediately. Exclusive breastfeeding is practiced for a very short period and not for the recommended four to six months. Most babies are given water, formula or other supplements in the first four months of life, which all jeopardise their nutritional status and increase the risk of infection. About 30% of children less than four months were given supplementary feeding in bottle with a nipple.

On average, children are breastfed for about 17 months, but large differences exist in regions. In the Southern Region, children are breastfed for less than a year, in the North Western Region for about one and a half year and in the North Eastern region for almost two years.

King and Burgess (1972:134) recommended that weaning should not replace breast milk, from six months to twelve months, feeding of babies should increase slowly; a number of meals and different sort of food should be given to the children in a day.

In the same book, on page 123, they recommended that babies should be given enriched porridge, mashed fruit or vegetables or undiluted fruit juice to provide them with vitamin C. Dark green or orange vegetables will provide them with vitamin A. By this time babies can be introduced to the family meals by trying a little of any suitable soft food.

At the age of one year, a child can eat other food about four to five times a day. From one to three years, food other than breast feeding becomes the main source of energy and nutrients. King and Burgess (1972:135) claim that at the age of two years breast

milk can continue to provide nutrients, however by the age of three years, a child usually has only few short breastfeeds by day or at night. This is token breastfeeding; breast milk now provides only a small part of the nutrients that the child needs to protect it against some infections and is also important for nourishment and comfort of a sick child.

According to Ministry of Health and Social Services (1994:9-10), breastfeeding has the following benefits to a child:

- It promotes closeness between mother and baby;
- It is clean and safe;
- It protects a child against infection, particularly diarrhoea;
- It protects a child against allergies like asthma and some skin diseases;
- It reduces the risk of diabetes, cancer, ear infection and dental decays during childhood.

From three to five years, many children have stopped breastfeeding and they need to have three meals a day with plenty protein, vitamin A micronutrients and vitamin C to prevent anaemia. At this age, a child also needs some oil and fat.

According to Likando et al (1993:16) the nutritional status of children deteriorates during the first 18 months of life and then remains relatively unchanged until the fifth birthday. Stunting, a sign of chronic under nutrition, is observed in 28% of children under five. Almost 1% of children are wasted, an indicator of acute under nutrition.

King and Burgess (1972:140) claim that infection from food and water is one of the main causes of diarrhoea in young children. To prevent this, families need to take extra care, because young children easily become sick. Likando et al (1993:29) maintain that diarrhoea was indicated as a matter of concern in the under fives because 50.4% of the households had under fives with diarrhoea two weeks prior to the study. The cause of the diarrhoea was spoiled food, dirty food, dirty water, bad sanitation, illness, flies and dirty utensils.



### **3. Teacher education for change**

Teacher education in Namibia is based on a democratic pedagogy, a methodology which promotes learning through understanding and practise which direct toward empowerment to shape the conditions of ones own life as stated in the broad curriculum of BETD (1998:2). The broad curriculum also explains that a teacher is one of the most important persons in the child's life, together with the family. A teacher who is well educated for the profession and who is committed to the well being of the child and young people is a person who makes an invaluable contribution to raising the quality of life of all citizens, and to the development of the nation. Teachers must therefore have sufficient knowledge and skills to be able to interpret syllabuses on the basis of the aim and objective of basic education, and to relate subject content to the needs of the learners.

According to M.E.C. (1993:79) what is needed by the Namibian people is a common, national, feasible and balanced programme that will fully prepare teachers to face and meet the challenges of reform and staffing the education system in the years to come. The programme must combine professional insight and skills with subject knowledge.

Newton (2000:66) states that theory and practise strategies need to refine these strategies to maximize their effect and some to underpin new ideas for supporting understanding. Teaching for understanding need not mean that teachers must abandon particular approaches that they feel are appropriate for themselves and their students. There should however be a demand or focus on understanding and this means that both the teacher and students will be actively engaged in it.

The broad curriculum (1998:2) outlines the professional competencies that need to be achieved by students at the end of the studies; one of them is teaching skills which a student needs to demonstrate at the end of their studies. The other four competencies are also as vital as the teaching skills which I have to explore in order to promote effective teaching and learning. Professionalism and responsibility go hand in hand in the teaching profession. The student should demonstrate professional behaviour and being a responsible citizen of the country. Inter personal and social skills for the

construction of meaningful relationships to promote efficient teaching and learning also need to be achieved.

The ideology of teacher education is to move away from teacher centred practices to implement learner centred education. The aim is to enlighten understanding of human kind, its culture, its tradition and its history. Furthermore methodology that promotes learning through understanding and practise directed towards the autonomous mastery of living condition (M.E.C. 1993:120). Teacher education will be closely linked to the curriculum goals and objectives of the basic education and the context of the schools in our society (M.E.C. 1993:80).

#### **4. The changes of teaching and learning theories**

The accepted models for instruction were based on the hidden assumption that knowledge can be transferred and interact from the mind of the teacher to the mind of the learner. Educators therefore focused on getting knowledge into the heads of their students, and educational researchers tried to find better ways of doing this (Bodner 1986:873). He furthermore states that it is unfortunate that all too many of us who teach for a living have uncovered evidence for the following hypothesis “teaching and learning are not synonymous, we can teach and teach well without having the students to learn”.

According to Oshang et al (1992:315-317), teaching means the interactions between teacher and students under the teacher’s responsibility in order to bring about expected changes in the students’ behaviour. The purpose of teaching is to help students to:

- Acquire, retain and be able to use knowledge;
- Understand, analyse, synthesize and evaluate;
- Achieve skills;
- Establish habits;
- Develop attitudes.

Learning according to them is both an emotional and an intellectual process which is resulting in some relatively permanent modification of the learner’s way of thinking, feeling and doing.

The constructivist model according to Bodner (1986:876-877) requires a subtle shift in perspective for the individual who stands in front of the classroom e.g. shifting from someone who teaches, to someone who tries to facilitate learning and shifting from teaching by imposition, to teaching by negotiation. The same model helps to explain that misconceptions are resistant to instruction.

Prawat (1992:361) claims that current conventions about the nature of teaching and learning differ dramatically from those of 20 – 30 years ago. Traditional views of knowledge based on a reality out there and in terms of which the acquisition of knowledge involved simply finding a match between what we know and reality, have been criticised. Van Harmelen (2000:6) equally gave the interpretation that what constitutes knowledge will be extended to accept and to build on the existing knowledge of the learner gained socially through interactions other than those in the formal classroom. In this philosophy teachers and learners are by and large co-learners; the roles of teachers are extended and will depend on specific situations. Learning theories are therefore based on the way we believe that learners construct, acquire and process knowledge.

Furthermore, van Harmelen, (2000:7) states that to view teaching as a prescribed activity that can be and is controlled by the curriculum and its philosophy is naïve. Teaching should rather be seen as a process of social interactions that take place between learners and teachers in a particular context. Therefore, to identify the teacher and the learner as specific entities is to decontextualise teaching and learning as something that exists as a tangible reality. This would be as absurd as trying to identify teaching only as a prescribed activity.

Prawat (1992:357) on the other hand discussed four questionable sets of beliefs about teaching and learning. First, there is a tendency to think of both learners and content as relatively fixed entities. The second set is the tendency to equate activity with learning, a notion that Dewey attempted to counter. He argued that student engagement is the best measure of educational value. The third set is between comprehension and application, learning and problem solving. Lastly, it is the popular view of curriculum as a fixed agenda; daily course to be run that consists of present means and

predetermined ends. Some of the ends to be achieved at the end of the course is the development of understanding for application.

## **5. Teaching for understanding**

Teaching for understanding is not a way of teaching; it is an overall orientation which allows a reasonable strategy that supports understanding (Putnam et al cited in Newton 2000:45). The process of understanding may be supported in a variety of ways and by teachers who may use very different approaches. For example, Garnett and Tobin (1988) studied two Australian teachers with very different styles and approaches; “they successfully supported understanding in their classrooms but gave very different kinds of lessons. They did, of course, have some things in common, both has strong subject knowledge and were interested in it; both were experienced teachers and had routines of managing behaviours. They often anticipated and deflected learners into more productive activities, in both classrooms, on task engagement were high. This gives an indication that when learners are on task understanding will occur” (Newton 2000:45).

Sternberg cited in Newton (2000:46) captures something of the press for understanding in his insistence on the analytical, creative and practical aspects of thinking. Analytical involves analysing, judging, evaluating, comparing, contrasting and critiquing. Creativity involves inventing, discovering, imagining and supposing, while the practical aspect is related to implementing, using, applying and the seeking of relevance. Lessons with activities of this kind are likely to require the learner to attend to, identify and relate elements of knowledge, create integrated structures, and develop these in applying them in particular context and in identifying their relevance. A good example given by Sternberg is about a school child learning about public service, this child might acquire the concept, design a public service, describe its purpose and why it will achieve its purpose and relate it to other public services.

This contribution to a press for understanding the child is expected to engage in the task in the ways which establish relationships and reasons and to develop them by using them. However, all the above mentioned requires a mental effort that is referred to by Ablard and Lipschultz cited in Newton (2000:46) as active mental engagement.

According to them active is sometimes taken to mean physically active, but active head do not necessarily indicate minds but active in making appropriate connections.

Van Harmelen (2000:18) explains a state of knowing as based on conceptual understanding rather than on the recall of facts. Conceptual understanding is also clarified by her as the knowledge what and why and knowledge how as skills that leads to understanding.

Newton (2000:39) argues that understanding cannot be transmitted but has to be constructed by the learner. For conscious understanding, this means the learner must know what counts as understanding in a given context. He further states that a human being is born with the ability to infer relationships, the kind of relationship and the structure that is admissible in a given context must be known.

Perkins et al as cited by Newton (2000:39) describes four dimensions of enculturation: learning from examples, by transmission, through activities and during interaction. A learner acquires ways of thinking about a subject from experience of the beliefs, practices and structures that prevail in that body of knowledge (Bishop 1988 cited in Newton 2000:39).

## **6. Teaching skills and theories that guide practice for change**

### **6.1. Teaching skills that brings about change**

It is important that a teacher should be given an opportunity to develop their teaching skills, if they are to render satisfactory teaching. This act can be seen as action designed to help students to learn. Anderson and Barns cited in Elliot (1996:6) provided the following definition of teaching: Teaching is an inter personal, interactive activity, typically involving verbal communication, which is undertaken for the purpose of helping one or more students learn or change ways in which they can or behave.

Elliot et al (1996:6) stated that the acquisition of teaching skills is a complex process, but one that can be mastered. Murphy cited in Elliot et al (1996:6) notes that teaching is a job that requires judgement given the authority that teachers have a growing opportunity to exercise their judgement and take responsibility for the result.

Teaching can be a joyful activity if the results are positive and satisfactory, meeting the teacher expectation for the job well done and it can also be disappointing if one did not put more effort to cater for all learners' needs. Elliot et al (1996:11) state that the joy of teaching comes from interacting with the students, which demands the intuition of the artist and the precision of scientific. Teaching as an art means one should know your subject and also try to get more information concerning the subject especially the latest discoveries.

Flinders, cited in Elliot et al (1996:12) believes that the art of teaching such skills as the way that teachers use body language to communicate a message and their use of silence to motivate, reveal the grace, subtlety, and drama of every day teaching. Analyzing these behaviours, (Flinders, in Elliot et al 1996:12) suggests several categories that capture the art of teaching, which are:

- The communication which goes beyond teaching, perception, corporation and appreciation;
- The last category according to Flinders is not something teachers do, but it is an important part of job satisfactory. It is a product of artistry, knowing you have done a good job.

Flinders cited in Elliot et al (1996:12) further says that considering teaching strictly as an art, however, is too limiting. Given the knowledge that researchers have acquired about the nature of instruction and about the methods of inquiry into any discipline, we should explore the notion that teaching can also be considered as a science.

Teachers may adopt the role of experimenters as they try new experimental methods and classroom procedures (even things as simple as changing the seating arrangement). Any scientific analysis will include the following steps:



“Identifying the problem for teachers; this means deciding exactly what they want their students to learn. Formulating a logical series of steps to reach a goal; this means a teacher is deciding which topic but how they will do so. Gathering the data for teacher this means deciding just what student behaviour is to be measured and then the best means of measurements. The last step is the interpretation of data, for teachers to decide if the students’ performance (the results of the teachers’ strategy and testing) has achieved the required goal.”

Teaching as a skill requires training that will enable the teacher to develop skilful actions. According to Rogers (1995:25) the instruction must match what he or she says or does to particular stage of skill development that a learner has currently achieved. He further says that everything the instructor does should be designed to help the learner’s skill development processes function effectively. Skills will develop only when learners try to perform them, doing the task and skill growth go together.

Roger (1995:37) points out that learning and performance are the two faces of skill development. Learning is about how information enters the head and how it is organised when it is in there. As instructors, we do not really need to know about learning, the learning machine takes care of that for us. He further argues that what we need to know about is how skilful actions are developed; we need to know about performance, not learning. Learning and actions are two related but not separated aspects of the recording process; recording is equal to learning and playing back music at the right speed is the performance of actions. The latter mentioned is the analogy used by Roger about the difference between learning and performing actions.

Roger (1995:41) wrote the instruction in doing, or movement skills as follows:

- Observe the task and identify the movement and the key points to be performed, what must be done and how to do it at each stage of the task;
- Design a sequence of exercise that will help the skills to develop in progressive stage;
- Let the learner see the skill being performed and emphasize what is being done and how it is done;

- Let the learner practice and observe the practice, guide the learner during performance to avoid errors and correct errors if they occur;
- When the learner can perform without errors, it allows the learner to practice and begin to build performance to required standards;
- When performance is to correct standards, provide lots of practice so that the skill can always be performed at that standard;
- The teacher begins to withdraw from the learner, but continue to monitor what trainee is doing.

If the above mentioned teaching skills are correctly implemented, successfulness and change in attitude might occur.

## **6.2. The theory that guides practice for change**

Theory is important to guide practice in any teaching/learning situation. A possible theoretical basis for guiding practice was proposed (Appleton 1989) which combines aspects of several constructivist theories, notably those of Piaget cited in (Appleton 1993:269). A learner comes to a learning situation bringing all previous experiences which are arranged into the schemata or mini theories ... a mix of cognitions, feelings and skills. A learning experience commences with some new encounters which the learners interprets and makes sense of in terms of his or her existing cognitive structure (Claxton cited in Appleton 1993:269).

The classroom context of the learning experience Claxton cited in Appleton (1993:269) influences which schemata of the learners cognitive structure are used to interpret the experience, both in terms of which sensory input to attend to; and which memories are activated in order to construct meaning for experience.

In the process of assimilation Piaget as cited in Appleton (1993:269) claims that the learners will perceive that either existing schemata provide an adequate explanation or the experience or there is some inadequacy in that the experience cannot be fully explained. If there are some aspects of the experience which do not fit with existing schemata are simply not noticed or even ignored.

Disequilibrium (Piaget 1978) or dissonance (Festinger 1957) cited in Appleton (1993:270) occurs when the learners recognize that existing schemata are inadequate to explain the experience. This results in uneasiness and a desire to reduce it by resolving the conflict between experience and schemata. By obtaining further information, dissonance is reduced as the learner modifies existing schemata, extends them or constructs a new one.

According to Piaget cited in Appleton (1993:269), a single experience of accommodation as described would be inadequate for any major changes to a learner's cognitive structure so that new structure would need to be used and tested in a variety of situations to be useful and accessible. Osborne and Wittrock cited in Appleton (1993:269) states that many learners would need assistance in accessing and interpreting new information relevant to the experience so that appropriate modifications to schemata and links between them could be made.

Appleton (1990) cited in Appleton (1993:271) outlined interventions or teacher actions that can be used to guide their practice. Teachers who are reflecting on their present ways of teaching may choose to modify aspects of their usual teaching strategies by incorporating changes suggested by some or all of the interventions could be implemented in a variety of ways, so that each could give rise to the several teaching strategies, developing on the teacher, context, and topic. Teachers concerned about a high level of false accommodation in their classes may seek to reduce its incidence by using strategies such as:

- Avoiding playing “guess my answer” with students during questioning;
- Having students provide their own tentative answers to their own questions;
- Accepting and valuing all answers and suggestions from students;
- Providing problems which have several possible answers of students to work on;
- Training students to use alternative cognitive strategies to wait for an answer and rote learning strategy.

Some or all these strategies could be use by a teacher in a particular context. How the teacher uses them would depend on personal approaches to control and manage the classroom.

## **2. Conclusion**

Looking at the exploration made so far, I came to realise that change is a very important thing that should take place in any setup to enable relevance, development and progress. According to Minett (1994:118) development can be seen as change or increment in complexity or becoming more complicated.

Understanding is seen to be a very important thing that can direct a teacher to be more skilful in using different teaching approaches. Understanding is not a teaching method but is an overall orientation that is seen by Sternberg cited in Newton (2000:46) as the analytical, creative and practical aspect of thinking. It helps the teachers and learners to implement theory into practice apply what they know from the classroom situation in their daily living and also to value what they know. If understanding occurs, the changes from old to new paradigm will also occur and teacher education will do away with the traditional teacher training to adopt the new theories that will bring about change if it is correctly applied.

Home Science as the medium for change can be seen as one of the subjects that deal much with the teaching of most of the life skill content. Therefore, the subject should be regarded as a medium for change that tries to redress most of the challenges facing Namibia as a whole. With the rise of feminism, Home Science education can play a big role in educating both males and females with life skills that are needed at home and even in the world outside their homes. It is also vital that the teaching/learning situation should enable the teachers and learners to implement theory into practice. It is only by so doing that the education will be seen as a vehicle that leads to a changing world.

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# **Research Proposal**

# Research Proposal

## 1. Field of Research and the Title

**Field of Research:** General Education Theory and Practice

**Title:** An exploration of the extent to which Home Ecology teachers implement their subject knowledge in their day to day lives.

### 1. Context

The year 1990 proved to be the turning point in the Namibian educational system. At independence the new Ministry of Education and Culture faced the problem of how to address the heritage of segregated education. The challenge was twofold, it was important to understand exactly how the education system was functioning and what could be done to improve it. At the same time, it was necessary to begin reforming the education system immediately (MEC 1993:19). The break from a segregated education and a shift to a democratic education emphasised the need for change. In response to these needs for change in society and education, the Ministry commissioned a wide range of studies in order to understand the nature and magnitude of the difficulties to be overcome (MEC 1993:20). The change brought a new approach which is learner-centred and central to this approach knowledge is not viewed as a static amount of content, but is what the learner actively constructs from experience and interaction within a social-cultural context, (Home Ecology Education Syllabus, BETD 8-10, March 2001:3). The move from a teacher-centred approach to a learner-centred approach has also challenged the belief that only book knowledge has value.

According to Van Harmelen (2000:18) a state of knowing is seen to be based on conceptual understanding rather on the mere recall of facts. Sternberg cited in Newton (2000:46) suggests that understanding is based on the analytical, creative and practical aspect of thinking. Creativity involves innovation, discovery, imagining and supposing, and the practical aspect is related to implementing.

To educate is to invest in our development and that investment is in human capital. This includes ensuring basic health care and primary education for children which is one of the most effective means of stimulating long-term economic growth and improving general welfare, without education development will not occur (MEC 1993:20). However, the Reform Forum, (July 1998:6) states that high qualifications do not always qualify teachers to improve their performance, knowledge consequently is not necessarily ploughed back into schools, nor does it necessarily enrich the process of learning at school. Due to the above mentioned, Home Science/Home Ecology teachers should be role models at schools as well as in their homes, applying their subject knowledge in order to give good examples to their families and to the entire community.

As part of the Namibian Educational process the previous Domestic Science syllabus was reviewed and the new curriculum came to be called Home Ecology at Junior Secondary school level and Home Science at Senior Secondary school level. The key aim of this subject as mentioned is the developmental aim, which seeks to improve the lives of people. Keyter and Jordan (2000:1) clearly state the subject aims to improve the quality of individual and family life through the development of positive attitudes, knowledge and skills. It is also stated in the rationale for the BETD Home Ecology syllabus (March 2001:2), that the subject aims to develop the capabilities and skills of people which enables them to make their own contribution to the improvement of their quality of life and those around them.

Home Science/Ecology Education aims to contribute to the total curriculum by providing the opportunity for students to develop their knowledge and skills in an area not only relevant their own lives but also in relation to understanding the role and applications of Home Ecology/Home Science in a contemporary changing, multi-cultural society (BETD, Home Ecology Syllabus, March 2001: 2).

According to Appleton (1989) cited in Appleton (1993:271) applying new ideas is to improve the status of the newly accommodated ideas and the teacher should provide opportunities for students to use them in practical real life situations. The

practical should preferably be in a problem solving form, and the problem should address issues that are real to the students and their world.

Although there has been a review of the curriculum little research has been done in relation to the developmental aim of Home Science/Home Ecology as a subject. My concern in this regard is the extent to which Home Ecology teachers themselves are implementing the guiding principles of the specific skills that underpin nutrition, environmental care and child care.

## **2. Research Goal**

The goal of the research is to: investigate the extent to which Home Ecology teachers embrace the development aim of the subject in their own lives, with a view to understanding issues related to the translation of knowledge into practice.

## **3. Research Methodology**

This research will employ an interpretative case study methodology in a qualitative tradition. Bassey (1995:12) defines case study as: “a network of coherent ideas about the nature of the world and the functions of researchers which, adhered to by a group of researchers conditions the pattern of their thinking and underpin their research.” He further explains interpretative research is to describe and interprets the phenomena of the world in attempts to get shared meanings with others. Interpretation is a search for deep perspectives on particular events and for theoretical insights. It may offer possibilities, but no certainties as to the outcome of future events.

Cantrell (1993:81) describes the purpose of the interpretative paradigm “to understand and interpret daily occurrences as social structures as well as the meanings people give to the phenomena.” The above description has led me to adopt the interpretative paradigm in my study. The approach will help me to produce a wealth of descriptive data that is needed to highlight the complexity of the study and will, I hope promote important insights into the situation.

The approach of a case study is particularly appropriate for individual research because it gives an opportunity for one aspect of a problem to be studied in some depth within a limited time scale (Bell 1993:3). Bell further states that the

greatest strength of the case study method is that it allows the researcher to concentrate on a specific instance or situation and to identify or attempt to identify the various interactions at work.

The tools I am going to use for data collection will include semi-structured interviews, which are a mixture of structured and unstructured interview. Lotz (1996:96) suggests that semi-structured interviews allow for both responding to determined questions and free responses. The other tool is going to be a questionnaire. Moser and Kalton as cited by Bell (1993:91) describe interviews as a conversation between interviewees and respondents with the purpose of eliciting certain information from the respondent. Bell further describes interviews as "adaptable," one can do follow up ideas, probe responses and investigate motives and feelings, which questionnaire cannot do. I decided to use questionnaires in order to give the respondent the freedom to do the answering without any fear. The interview will be used with the purpose of complementing the questionnaires.

The target population in this research will be the BETD graduates in Home Ecology Education at Rundu College of Education. I have identified six schools in the Rundu area where this subject is offered, the teachers at these schools will be my participants.

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# **An Empirical Study**

**Title: To what extent do Home Science teachers practice what they teach?**

## **Abstract**

*This paper reports on the exploration of the extent to which Home Science teachers practise what they teach. The study concentrates on the selected skills which are; food preparation and cooking, caring and cleaning of living the environment and the nutritional feeding of children from birth to five years. The study employs an interpretative case study focusing on Home Science teachers chosen from schools in the surrounds of Rundu. Semi-structured interviews and questionnaires were used as data collection instruments. The analysis of the data from the instruments revealed that Home Science teachers do not practise what they teach because of their extended families, lack of resources, lack of time and HIV/Aids. However cultural background was also mentioned as one of the limiting factors why these teachers are not implementing some of the guiding principles gained from Home Science class. Furthermore the presentation of theory and practice lessons need to be explored in future in order to determine the relevance and depth of the knowledge and skills gained from Home Science lessons.*

## **Introduction**

The purpose of this paper is to explore the extent to which Home Science teachers practise what they teach. The research focuses on three selected skills taught in Home Science: food preparations and cooking, environmental care and cleaning and the nutritive feeding of children from birth to five years old.

Traditionally Home Science was regarded as a subject that should prepare girls for the task of being housewives, whereby most of the skills acquired in this subject were not seen as important as those skills gained in other subjects. This was due to the fact that most skills gained from Home Science are taught at home by parents to their children. Van Harmelen (2000:6) gives the interpretation of what constitutes knowledge builds on the existing knowledge of the learner gained through social interactions other than those in the formal classroom.

Home Science Education has moved from domestication to professionalisation of the teacher as a person who has commitment and a sense of responsibility, plus the knowledge and skills to raise the quality of life of their entire country (Home Ecology Syllabus March 2001:2). The traditional emphasis in teaching this subject was placed more on rote-

learning and the recall of facts (which was the approach that dominated all the learning styles prior to Namibia's independence) than on how to apply the knowledge and skills in daily life. According to Van Harmelen (2000:18) a state of knowledge is based on the conceptual understanding rather than on the recall of facts. Conceptual understanding is also clarified by her as the "knowledge how" and as skills that lead to understanding.

### **Research context**

In an attempt to find out why Home Science teachers are not practising what they preach, three teachers who are involved in the teaching of this subject from the schools surrounding Rundu were the participants in this research. The aim of this research is to try and find out why they are not practising what they teach, in order to get some insights on how to improve the teaching of Home Science. According to May (1985) as cited by Wilmot (2000:22 and 40) it is not possible for a child to understand the ideas and concept embedded in each subject unaided, for he/she does not possess the skills to do so. This means that a child needs a teacher who will aid him/her through the teaching/learning process, the facilitating of tasks and scaffolding of the content will make understanding easier for the children. According to Angula cited in the Reform Form (September 2000:14) the teachers are the prime movers in education delivery. Their attitudes, inclinations and competencies will to a large measure, determine the quality and operation of an educational enterprise. It is hoped that this research will contribute in finding out reasons, problems or limitations that hinder Home Science teachers in applying the knowledge and skills gained from the subject. To create a teaching/learning situation both inside and outside the classroom in order for learners to acquire the necessary skills and knowledge is one of the expectations of the teacher that is stated in the subject policy (Home Science Subject Policy Guide 2000:14-15).

The three teachers involved in the research were from different schools, one from the school that is situated at the eastern part of Rundu, one from within the town and the other one from the western side of the town. All three teachers are qualified graduates of BETD at Rundu College of Education the institution in which I am working. The BETD programme was seen after independence to be a stepping stone to the future of teacher education and this is confirmed in Toward Education for All the BETD programme is not seen as the final stage of formal education, or as the completion of teacher education. The rapidly increasing and changing state of knowledge and the new demands that are made

on the role and function of the teacher, make it possible to regard initial teacher education as an isolated part of the career. Rather it provides a section of knowledge and experience as the first induction into the profession, an initial step in an ongoing process of professional growth and development. These three teachers are all women and were engaged in answering questionnaires and thereafter they were given some guiding principles in Home Ecology to read to enable them to list those guiding principles that they are not applying and give the reason why they are not applying these specific principles. This took place during April-May 2003, thereafter I arranged for an informal meeting at Rundu College of Education which did not materialise as planned but I arranged again to visit them all at home. I came to realise that these teachers were not comfortable in sharing information and opinions with me. The completion of the guiding principle list together with the reasons they have written as to why they are not applying certain principles helped me to get what I needed from them. Questions such as (what do you want to do with the outcomes of the research)? (Are we going to be acknowledged in your research report)? Were some of the questions asked by these teachers.

Applying knowledge and skills gained from any subject will enable a person to be capable of improving their own life and others lives. The BETD Home Science Syllabus (March 2001:2) states clearly that the capabilities and skills of people enable them to make their own contributions to the improvement of the quality of life and of those around them. Anderson and Burns cited in Elliot et al (1996:6) states also that teaching is an interpersonal activity, typically involving verbal communication which is undertaken for the purpose of helping one or more students to learn or change ways in which they can behave.

### **Research Methodology**

This research located in a qualitative research framework, employs an interpretative case study methodology with the aim to describe ways in which Home Ecology teachers contradict what they teach and what they implement and secondly to investigate why this happens. The approach of a case study is particularly appropriate for individual research because it gives an opportunity for an aspect of a problem to be studied in some depth within a limited time scale (Bell 1993:8).

Data was collected using questionnaires, semi-structured interviews and an informal meeting. Arksey and Knight (1999) argue that approaching a research question from

different angles and bringing together a range of views has the potential to generate new and alternative explorations. The gathering of such a range of data should therefore enable the construction of plausible explanations (Creswell 1994; Kupper 1997; Berg 1998) which will also rest on the premise that the weakness of each single method would be compensated by the counter-balancing strengths of another.

Data collected were analysed by means of a qualitative approach. The procedures of data analysis were guided by Tesch (1990) cited in Creswell (1994:153). The process of analysis can be described as interactive and is better represented by a spiral rather than a straight line (Dey 1993). The process of qualitative analysis is based on data reduction and interpretation (Marshall and Rossman 1989:114) in Creswell (1994:154). Tesch (1990) called this process de-contextualization and re-contextualization.

## **Findings**

It became evident that the three teachers did not have very different reasons for not applying some of the principles under the three selected skills of home ecology which are food preparation and cooking, environmental care and cleaning and nutritive feeding of children from birth to five years. The result of the questionnaire concerning the above mentioned skills are presented below; starting with the first respondent up to respondent number three. The list of the guiding principle which each respondent is not applying under the three identified skills will be presented on tables. The reasons why they are not applying these principles will follow after each table.

### **1. Food preparation and cooking**

List of guiding principles which they are not applying;

<b><u>Respondent One does not:</u></b>	<b><u>Respondent Two does not:</u></b>	<b><u>Respondent Three does not:</u></b>
<ul style="list-style-type: none"> <li>• Follow recipe correctly and apply the practical guide lines;</li> <li>• Measure all ingredients accurately;</li> </ul>	<ul style="list-style-type: none"> <li>• Use artistic values such as garnishing when food is ready for serving;</li> <li>• Use different ways of food preparation e.g. chopping;</li> </ul>	<ul style="list-style-type: none"> <li>• Follow recipes correctly and apply all practical guiding;</li> <li>• Complete all tasks on</li> </ul>

<ul style="list-style-type: none"> <li>• Use artistic values such as garnishing the food when it is ready for serving;</li> <li>• Apply both science and art in food preparation to ensure high standard;</li> <li>• Use convenience food to save time and energy;</li> <li>• Follow a menu for each meal preparation;</li> <li>• Prepare a balanced diet according to the three basic food groups;</li> <li>• Apply techniques such as mixing food correctly all the time;</li> <li>• Consider culture and climates during food preparations;</li> <li>• Consider family types during food preparations</li> </ul>	<ul style="list-style-type: none"> <li>• Apply techniques such as mixing food correctly all the times;</li> <li>• Consider culture and climate during food preparations.</li> </ul>	<p>the time and before serving;</p> <ul style="list-style-type: none"> <li>• Measure all ingredients accurately;</li> <li>• Use artistic value such as garnishing when the food is ready for serving;</li> <li>• Apply both art and science in food preparations to ensure high standard;</li> <li>• Follow menu for each meal preparations;</li> <li>• Prepare balanced diets always according to the basic food groups;</li> <li>• Use different ways of food preparations e.g. chopping, cutting and grating correctly;</li> <li>• Apply techniques such as mixing correctly all the time.</li> </ul>
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According to the respondents lack of material and financial resources, cultural background, time and to a certain some extent lack of knowledge concerning the use of some of the guiding principles hindered their implement on the above mentioned.

However, respondent three added that some of the guiding principles she listed are not important to her and that is why she is not applying them.

## 2. Environmental care and cleaning

Guiding principles which they are not applying:

<b><u>Respondent One does not:</u></b>	<b><u>Respondent Two does not:</u></b>	<b><u>Respondent Three does not:</u></b>
<ul style="list-style-type: none"> <li>• Apply proper cleaning methods that are suitable to each article always;</li> <li>• Wear an apron or overall all the time when cleaning;</li> <li>• Dust surface always after sweeping the floor;</li> <li>• Use abrasives to remove stubborn stains except on stainless steel, chrome and varnished copper;</li> <li>• Remove stains from glass by soaking in acid solution like vinegar and water;</li> <li>• Wipe treated wood with a damp cloth or wash with warm water and soap;</li> <li>• Wash plastics with warm soapy water and do not use coarse abrasives on plastics;</li> <li>• Remove stubborn dirt from plastic by using bicarbonate of soda.</li> </ul>	<ul style="list-style-type: none"> <li>• Apply proper cleaning methods that are suitable to each article always;</li> <li>• Wear an apron or overall all the time when cleaning;</li> <li>• Remove stain from the glass by soaking in acid solution;</li> <li>• Use abrasives to remove stubborn stains except with stainless steel, chrome and varnished copper.</li> </ul>	<ul style="list-style-type: none"> <li>• Apply proper cleaning methods that are suitable to each article always;</li> <li>• Wear an apron or an overall all the time when cleaning;</li> <li>• Use abrasives to remove stubborn stain except stainless steel, chrome and varnished copper;</li> <li>• Wash glass in warm soapy water rinsed in hot water, allow to drip dry and then polish it with a soft cloth to preserve the sheen;</li> <li>• Remove stains from glass by soaking them in an acid solution like vinegar and water;</li> <li>• Wipe treated wood with a damp cloth or wash with warm</li> </ul>

		water soap; <ul style="list-style-type: none"> <li>Remove stubborn dirt from plastic by soaking or using bicarbonate of soda.</li> </ul>
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The three respondents mentioned the same factors under the first skill as to why they are not applying the above listed guiding criteria. These limiting factors are financial resources, cultural background and lack of knowledge. Respondent three stated clearly that she does not see the need for using different cleaning agents when cleaning different articles. According to her any type of cleaning agent can do the cleaning as long as it is used correctly.

**3. Nutritive feeding of children from birth to five years**

List of guiding principles not being applied:

<p><b><u>Respondent One does not:</u></b></p>	<p><b><u>Respondent Two does not:</u></b></p> <ul style="list-style-type: none"> <li>Use breast milk as the only food for a baby;</li> <li>Give young children porridge, mashed fruits and dark green vegetables for vitamin C;</li> <li>Give young children fat and oil in their foods.</li> </ul>	<p><b><u>Respondent Three does not:</u></b></p> <ul style="list-style-type: none"> <li>Breast feed up to three years to protect the baby against infections;</li> <li>Introduce babies to family meals at six months;</li> <li>Feed children four to five times a day at one year;</li> <li>Increase the baby's</li> </ul>
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		<p>food after weaning;</p> <ul style="list-style-type: none"> <li>• Give young children porridge, mashed fruits and dark green vegetables for vitamins C;</li> <li>• Give children a balanced diet everyday;</li> <li>• Give breast milk as the only food for a baby.</li> </ul>
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Respondent number one did not list any principles she is not applying under this skill. She only said that all that is listed are the things she is applying and she does not have any thing to comment on. The discussion was not fruitful at all because of her not being willing to share more concerning the way she raised her children.

The second respondent said that she is not applying the above listed guiding principles because of the financial constraints and HIV/AIDS. She added by saying that she stopped giving breast milk to her children because of the fear of the killer disease HIV/AIDS. This respondent also said that some of the guiding principles such as giving fat and oil to young children are regarded by her as not so important to apply. However the last respondent only mentioned one reason why she is not applying the listed guiding principle and that is lack of financial resources.

## **Analysis of the results**

Data collected from questionnaires and the informal discussions were analysed by means of coding, a qualitative approach for analysing data in terms of trends which emerge in data, allowing for categorization of those trends in a coherent fashion (Schumaker and McMillan (1993) cited in Erickson (1998:76). The data collected from questionnaires by listing the guiding principles which they are not applying and giving the reasons why they are not applying the mentioned principles helped the research process to get the needed information.

## **Research findings**

According to the discussions it seems that the three teachers who were involved in the study had differences in the listing of the principles they are not applying in their daily living. I also came to realise that there are problems why they are not applying the listed guiding principles. Therefore this study has explored and offered some insight into this question, why these teachers are not applying the mentioned guiding principles under the three selected skills. As the results of the study the following reasons emerged; lack of material resources, lack of time, lack of financial resources, family size and cultural background and HIV/Aids. The Home Science teachers said the following concerning the themes that emerged from the research content.

### **Lack of material resources**

All three teachers mentioned that material resources are the limiting factors in food preparations. They stated clearly that because of not having the necessary equipment such as chopping, mixing and measuring tools they tend to ignore this principle and do not follow the rules. According to De Viliers et al (1987:56) when preparing and cooking foods there is a need to follow some rules due to loosing of nutrients present in the food, falling apart of food and to keep the flavour of food.

### **Lack of time**

Time as a limiting factor was mentioned by one of the teachers saying that it is always impossible for her to follow a menu or measure ingredients during cooking because of not having enough time to do all those tiring activities. She also said that the only time she always prepares food is immediately after work during lunch time or sometimes late in the afternoon. She further made it clear that most of the activities in food preparation and cooking need a lot of time if one is to implement them. It also came out clearly in the questionnaire responses that time is a limiting factor for not cleaning their living environment daily, such as dusting and washing the floor.

### **Lack of financial resources and knowledge**

This is one of the reasons that emerged in all three selected skills on which the research is based. A financial resource according to them is a serious limiting factor because it hinders their buying various foods in order to provide their family members with balanced diets. They stated that they only provide their families with food available and all three teachers said that porridge, meat and milk are the common food which they can afford. Under environmental care and cleaning skills all three teachers have mentioned that money is a problem and that is why they are not using the correct cleaning agents when cleaning different articles such as plastics and glasses. One of them has stated clearly that using vinegar as a cleaning agent was not something known to her and it was her first time to hear it when she read the list of the guiding principles. This can be ascribed to a lack of knowledge. However De Viliers et al (1987: 16) stated clearly that home management and environmental care depends on the availability of money and other resources. They concluded by saying that in managing home, skills and knowledge are needed to plan and organise various household tasks.

Financial resource is also mentioned as a big problem for two teachers in the nutritive feeding of their children aged from birth to five years old. According to them they are not able to give balanced diets to their growing children; one said that because of not having money to buy various foods for their children, she opted to give breastfeeding up to three years to ensure that her children could still get nutrients from breast milk. The value of

this mentioned is confirmed by King and Burgess (1972:91-91) when they said that the best food for babies is breast milk, no other milk is good, breast milk is all that a baby needs for at least the first four months of life. Many babies need nothing but breast milk for six months, and can continue to be the main sources of nutrients for several more months and it can provide one third or more of nutrients that a child could need up to the age of two to three years.

### **Family size and cultural background**

This reason was mentioned by two of the teachers as the limiting factor in food preparation and cooking. They said that their families are too large and it's impossible to prepare balanced meals or even to afford various types of food for every family member. They also mentioned that their cultural background only recognise porridge, meat and milk as the main and common food to be served for different meals. In conclusion they also stated that their cultural background together with their family size do contribute to their eating habit as well as their cooking methods. The Home Ecology teacher's guide also states that the subject allows tying together work and family, because skills and knowledge required in the home and work place do overlap, so that practical living skills employed at home can further develop for use in an occupation outside the home. It further states that it empowers the individual to make life choices based on interest and aptitude, rather than tradition and gender. Teaching and learning of this subject are closely linked to real-life problems and situations in learners' homes and communities (Keyter and Jordan 2000:1).

### **HIV/AIDS**

One of the three teachers mentioned HIV/AIDS as one of the limiting factors why she is not breast feeding her children because of the advice she was given that if one is HIV positive, your children might be affected with the virus through breast feeding. According to her she opted to bottle feed her children despite of all the risks that go together with bottle milk because of not being sure about her HIV status. King and Burgess (1972:92) state clearly that artificial milk does not contain the right amounts of all nutrients, they also concluded by saying that artificial milk is not well digested and absorbed.

## **Reflections**

Notwithstanding the difficulties encountered in the course of collecting data for the paper, I believe that the insights gained from the study have highlighted key reasons why they are not applying the knowledge and skills they gained from the subject. According to Boyce (1996:88) teaching concerns the way we construct relations between teachers and learners. How we understand the process of teaching and learning shapes our work as educators. All their responses from questionnaires and informal discussions increased my understanding and insight concerning my research question. One could see that the emerging themes revealed another picture which needs further research.

I feel that the reasons why the teachers are not applying what they teach are many and one can link them to the teachers' background be it cultural or prior knowledge and skills. In order for the teachers to apply knowledge and skills gained in Home Science, much needs to be done to promote teachers' own development of knowledge relevant to them, their physical and social and social environment.

There is a revelation in this research that changes did not take place despite the knowledge and skills the teachers have gained. According to Anderson and Burns cited in Elliot et al (1996:6) teaching is interpersonal, interactivity and typically involves verbal communication and is undertaken for the purpose of helping one or more students learn or change ways in which they can behave. However HIV/AIDS is one of the limiting factors which emerged in this research and this can be considered as one thing that will force people to change the ways in which they behave as revealed in this paper.

## **Conclusions**

The problems mentioned by the teachers are the limiting factors hindering them in applying the knowledge and skills they have gained from the subject during schooling as well as during teaching. In the presentation of research content, one can see clearly that some of the mentioned reasons about why they are not applying what they teach could be linked to lack of knowledge and skills on how to utilise limited recourses to achieve goals successfully. Bodner (1986:874) shows that in the constructivist model knowledge is assumed to fit reality the way the key fits the lock, knowledge is good if it and when it

allows us to achieve our goals. It seems as if the knowledge gained from Home Science is not fully applied and it does not fit their reality. However more knowledge is still needed in order to try and utilise what is available to achieve our goals.

The emerging themes in this research should not be too problematic in hindering teachers applying the knowledge and skills they gained. Some of the problems mentioned such as lack of time, lack of material resources and cultural back ground can not be big problems as such. When it comes to time there is never enough, but one need to use it wisely to do something that seems to be more important to one's family or work. Material resources can also be improvised, one does not need to use the exact tool or equipment but can use any that can perform the same task. The cultural background of someone can be a limiting factor but it is also not supposed to stop one from doing something one deems to be important for the family. It is stated in the rationale of BETD Home Science Syllabus (March 2001:2) that the subject develops capabilities and skills of people, enables them to make their own contribution to the improvement of their quality of life and the quality of those around them. Keyter and Jordan (2000:1), however, define the subject as the study of the interaction between humans and their environment and how humans manage their resources. The main aim of the subject according to them is to improve the quality of individual and family life through the development of positive attitudes, knowledge and skills.

In conclusion the study has opened a door for further research in order to determine whether the theory and practical lessons offered in Home Science classes are adequate and relevant in equipping learners and students with relevant knowledge and skills to be applied in their daily living.

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# **Conclusion Statement**

### **A reflection on the research portfolio**

The writing of a research portfolio was foreign to me and this journey was not easy due to the fact of the fear of the unknown. A research portfolio is a very important tool that determines someone's progress as a researcher in a give period of time. According to Sweet (1993) an educational portfolio is a collection of evidence that demonstrates the progress of acquiring knowledge, skills and attitudes. It also gives a picture of your individual experience in a learning situation. The research portfolio consists of the contextual analysis, the epistemology research, the literature review, the research proposal and the research paper.

The reflection on the research portfolio is an attempt to focus on how I have grown as a researcher. I feel this act is very important because it will give an account of my personal growth, understanding about many issues that were crucial in this research journey. In this reflection I am looking deeper into my understanding on issues that underpin research, my professional growth and my current position now in the above mentioned issues and where to go from here.

My understanding of research was shaped after I attended the session at Rhodes University. The presentation of papers made this a reality because the researchers themselves were explaining the process they went through, emphasizing their ups and downs. The whole picture of doing research became clear and the reading of some of the papers gave more insight into the research traditions. Things such as academic writing, critical thinking, critical writing and conceptual understanding became part of the research journey.

The scaffolding done in the class and the reading with which we have engaged after the sessions placed me in a position of being able to read, write and think critically. This is the time I came to master these through looking at others' writing styles and reading critically trying to focus on the needed information. During this time I came to realize

that academic reading differs from reading a storybook and one needs to read with a conceptual understanding when it is an academic paper. The reading of the Namibian educational reform process gave me a better understanding about critical reading because of the issues being relevant to me.

Journal writing as part of this process helped me to become more comfortable when it comes to critical writing. This is due to the fact that our tutors put more emphasis on critical writing during the feedback to the journal entries. Our tutors persisted critical writing and this to me was worthwhile because it forced me to break away from the habit of writing randomly without coming to the point. As I have mentioned before my critical writing worked hand in hand with my critical reading. It is through this that I started to structure a paper with threads of arguments running through the paper as expected.

The research portfolio is again a tool that helped me to do analysis. This skill was deepened when I engaged myself in the desktop analysis. With a lot of exercise done during the contact sessions the skill of analyzing became part of me. I developed an analytic mind looking at things in a different way from usual.

Research methodology, its weaknesses and strengths became clear to me after reading much. I also gained knowledge concerning the different research traditions as well as the research tools needed for the collection of information or data. The stages in doing research became clearer and this process taught me the importance of topic formulation before embarking on a research study..

My professional growth can be seen in my understanding of the epistemological issues, the strong link between theory and practice and my widening scope of the theory that underpins behaviorism and constructivism. My intellectual level moved, as I became richer with more terminology that I gained through the research process.

I have to admit that my knowledge concerning the curriculum became clearer and reading papers from our Namibian writers placed me in a better position in my writing. The

module on curriculum taught me that knowledge that is worthwhile is attached to the current time, the world's view about education in the formal setting and the political influences.

This process gave me a new set of lenses, which is valid in today's world, which I think, will have to change in a due course. Looking back where I have started a lot of changes in me as a person took place. I have to agree with the statement that says that knowledge is not static, it changes. The research portfolio was the guide in my personal journey of education to the enlightenment of many issues such as reading critically, reading between the lines and the issue of conceptual understanding. The reading, writing and the tutoring that took place helped me to understand what was expected from me. I became critical in my reading, writing, reasoning and as well as in my thinking. Since I engaged myself in reading more, my knowledge on educational issues widened and I found reading more enriching. The epistemology research empowered me much in my profession due to the fact that all that we did is relevant and applicable in my work as a teacher educator. This course gave me almost the whole picture concerning the epistemology under which our Namibian education is operating. I am now feeling confident in sharing my work with colleagues because of knowing the importance of sharing. This forced me to encourage my students to share their work with others in order to produce better results and for the sake of progress.

Being a member of the curriculum panel who is tasked to do the designing and the implementing of the curriculum I feel at this point and time that the desktop analysis placed me in the right position. It made my job easier whenever I am attending a curriculum panel at NIED. I am now able to challenge colleagues on educational issues and expect to be challenged because of knowing what to say and when to say what. My reasoning capacity became broader and I am able to brainstorm and argue about educational issues. The flexibility of the whole course taught me also to be flexible not only in my teaching, tutoring or assessing but in all aspects of life.

Doing research gave me a good stand point in my job of marking my student's research papers because of knowing what I am doing and how. It is no longer a headache for me to help my students during the selection of a topic and even through the whole research process. Most of the stages in the research became more clear during this period, but the most important thing I had problem with at the beginning of the course is the referencing. However currently I have to admit that with the "blue book" at hand all the problems have been solved and I am confident in helping my students to do referencing in their writing. Having good role models such as my tutors I am able to following most of their good examples such as being a good reader during the marking of my students' assignments and I can see myself growing in this process.

