

TRANSKEI COLLEGE OF EDUCATION STUDENTS'
PERCEPTIONS OF FIELDWORK IN
GEOGRAPHICAL EDUCATION

THESIS

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Requirements for the Degree of
Master of Education
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by

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DECLARATION

I declare that this thesis comprises my original work, and has not been submitted for a degree at any other university.



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ABSTRACT

The understanding of geographical concepts and the development of skills requires the use of appropriate teaching strategies. Modern school geography incorporates a wealth of techniques and embraces a wide range of strategies which are directly suited to achieve the aims which are central to current geographical education. Techniques which directly involve the learner are perceived to be the most valuable.

Of the many participatory strategies suited to the teaching of geography, fieldwork is accepted as the most worthwhile.

This study investigates student teachers' perceptions of fieldwork in their college studies and as a teaching strategy. Extensive literature on fieldwork in geographical education was analysed. A survey was conducted to assess the student teachers' fieldwork experiences.

The results reveal that fieldwork is neglected in Transkeian schools and Colleges of Education, despite the fact that it is required by school syllabuses, and the fact that in many areas suitable sites are readily accessible. Conclusions are drawn and recommendations made for the inclusion of fieldwork in geography courses at Transkei Colleges of Education.

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DEDICATION

For Vuyelwa, my mother, who has taught me so much about patience and perseverance, and Siyanda, my lovely daughter, for her understanding that there were times I could not be with her because of my studies.

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CHAPTER 1

1. INTRODUCTION AND PROBLEM SETTING

1.1 INTRODUCTION : BACKGROUND TO THE RESEARCH

The physical and cultural landscapes are the geographers' laboratory (Jordaan and Alberts, 1982). The value of fieldwork in geographical education for the interpretation and understanding of the various components of the landscape and their interaction is widely accepted (Nightingale, 1981). By providing concrete experiences fieldwork sharpens geographical skills, develops interest and may foster a critical attitude which is the hallmark of the mature educated person (Mills, 1981; Nightingale, 1977). Everson (1970:114) claims that, "... without fieldwork or field research the theory could easily and quickly become dull, unrewarding and probabilistic". Research shows that fieldwork improves the attitude of students towards geography, a first requisite for effective learning (Long and Robertson, 1966).

School fieldwork has evolved from a passive teaching-in-the-field approach to small scale studies which attempted to 'fit' the real world situation into the theoretical model presented in the textbook. The most recent approaches to fieldwork have, however, moved towards integrated people-environment studies which attempt to explain concepts (Hart and Thomas, 1986). The implications for teachers-in-training of this type of approach are considerable, in that the teacher is expected to be familiar with a wide variety of techniques which go beyond measurement and recording.

Both the 1985 and the proposed 1993 Department of Education and Training Secondary School Geography Syllabuses strongly support the

use of fieldwork. The major sections of the syllabus, such as geomorphology, settlement geography, ecosystems and environmental management and conservation, are all enhanced by experiential learning. Many teachers, however, neglect this aspect of geography teaching. Research by Ballantyne (1986) indicated that Cape Education Department teachers ranked fieldwork sixteenth out of twenty-one methods listed, in terms of the frequency with which fieldwork is applied and with respect to its perceived value in geographical education.

1.2 STATEMENT OF THE PROBLEM

In Transkeian Colleges of Education the Geography course is a three year programme (Appendix E). The curriculum is composed of three major subject groups, namely, Educational Foundations, Major Subjects and Credit Subjects. The geography course consists of eight periods per week of which six periods are devoted to methodology and two to content. The theory of using fieldwork in schools is covered in the methodology section.

If fieldwork is to be successfully implemented in schools it follows that prospective teachers graduating from Colleges of Education ought to be familiar with the skills and approaches associated with this aspect of geographical education. At present practical fieldwork plays a minor role in the Geography method courses at Transkeian Colleges of Education, which reduces the experiential value of fieldwork and could hamper the students' understanding of the role of fieldwork in Geography.

1.3 GOALS OF THE STUDY

This research aims to:

Investigate students' perception of fieldwork in their own College studies and as a teaching strategy.

In order to achieve this goal clarity had to be sought in respect of the following:

- i) student teachers' experiences in school fieldwork;
- ii) the extent to which fieldwork experiences are incorporated into College of Education geography courses;
- iii) student teachers' perceptions of the value of fieldwork;
- iv) student teachers' perceptions of problems related to conducting fieldwork.

1.4 RESEARCH LOCATION

This research was undertaken at four Transkei Colleges of Education offering Geography in the secondary school teacher-training programme. The research involved the third year Geography specialist students at these Colleges. The research was completed in two phases:

- i) The first phase included the development and administration of a questionnaire. Students' perceptions of fieldwork in Geography were assessed by administering a questionnaire investigating students' understanding of the approaches to fieldwork and the role of fieldwork in Geographical Education (Cohen and Manion, 1985). The researcher personally administered and controlled the questionnaires to avoid

problems associated with a postal survey. The data was analysed both qualitatively and quantitatively (Cates, 1985; Lewis, 1973; Burroughs, 1975).

- ii) The second phase was concerned with conducting interviews. Semi-structured interviews were conducted to try and deal with problems that arose from the questionnaire and in an attempt to increase the validity and reliability of the survey.

On the basis of the above data, guidelines were suggested for the inclusion of practical fieldwork units in the Geography method course for Secondary School teacher-training in Transkeian Colleges of Education.

1.5 CHAPTER OUTLINE

Chapter 2 justifies the use of fieldwork as a teaching strategy in Geography. The main focus is on the aims and objectives and the educational value of this strategy. Extensive literature on fieldwork has been surveyed. The research methods used in this survey are discussed in Chapter 3 while Chapter 4 analyses the data collected from the questionnaire.

Chapter 5 analyses the data collected from the interviews and Chapter 6 focuses on the conclusions and recommendations arising from the research.

CHAPTER 2

THE ROLE OF FIELDWORK IN THE GEOGRAPHY
CURRICULUM : THEORETICAL CONSIDERATIONS

2.1 INTRODUCTION

Fieldwork has been defined in a variety of ways but with little agreement upon its explicit meaning.

Briault and Shave (1963) saw fieldwork as accurate observation which is accurately recorded. Concurring with these authors Frew (1986:147) claims that "fieldwork is the 'real geography' by means of which pupils acquire knowledge through direct observation of the environment". The main aim of this approach is to develop observation skills as its emphasis is on that which can readily be seen. This method may lead to the neglect or overlooking of complex issues. On the other hand Biddle (1973) and Deer (1977) describe fieldwork as finding out about the real world. This approach may then extend beyond the sharpening of observational skills to include understanding of the areal/spatial complexities of the human and physical landscape.

According to Nightingale (1977:22) fieldwork is "...formal study outside the classroom undertaken by school children as part of their academic work". This emphasises that fieldwork is part of the school geography syllabus. It is for this reason that Weston (1977:9) is of the opinion that "Working outside the school classroom and school must be accepted just as going into the 'laboratory'...". The environment must be regarded therefore as a classroom without walls. Concurring with this, Bailey (1987)

sees fieldwork as planned discovery, whereby the teacher prepares situations from which his pupils learn geographical facts and ideas themselves. These definitions emphasise the role of fieldwork as being concerned with observation, understanding and solving problems in the real world situation.

An analysis of the many proposed definitions for fieldwork reveals a close connection with particular approaches employed in this teaching strategy. Fieldwork approaches, however, are closely aligned to current geographical paradigms and reflect changes in thinking about the subject. It is therefore necessary in this chapter to briefly consider the geographical theories which influence the present geography syllabus and thereby field approaches. This chapter furthermore considers recent developments in fieldwork in Southern Africa. In the course of the discussion an analysis will be made of the approaches to fieldwork as a teaching strategy and the perceived role and value of fieldwork in geographical education at Secondary School level.

2.2 PARADIGM SHIFTS AND THEIR INFLUENCE ON SCHOOL GEOGRAPHY

The most recent geography syllabuses in South Africa reflect a variety of influences which have originated as a result of various approaches to the subject. Clark (1989) traces the development of geography as a school subject in South Africa. The section below briefly analyses theoretical changes that have influenced geographical education since the 1960's, particularly in Southern Africa.

2.2.1 POSITIVISM

The 1960's were characterised by the influence of Positivism on geographical thinking. This was reflected in the move from descriptive, factual geography towards the idea that the world around us had to be investigated by scientific and systematic means, which led to an emphasis on the search for laws, order and regularities. This brought about the introduction of quantitative techniques as a foundation for geographical investigation. This approach to inquiry led in turn to the increased importance of fieldwork. Fieldwork approaches had to change from mere observation of the landscape towards a problem-solving approach using a systematic scientific methodology. Positivism, however, tended to neglect the role of man in the environment. A perceived problem of the positivistic approach in educational terms was that while greater emphasis was placed on the cognitive development of the child the affective domain was neglected. Figure 2.1 depicts positivism as the intersection of empiricism and rationalism.

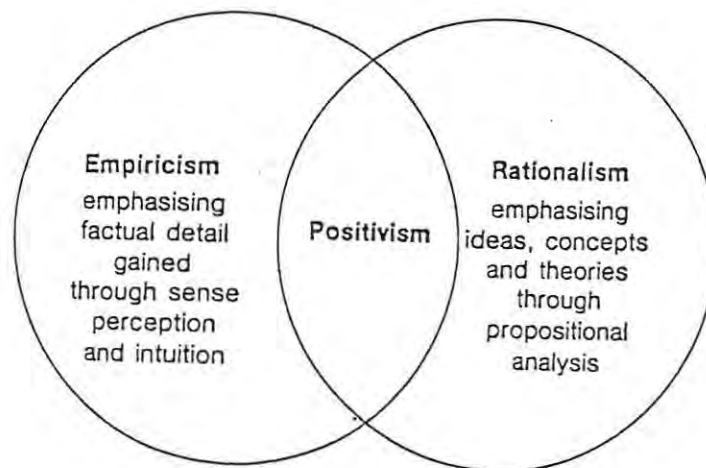


Figure 2.1 Positivism as the intersection of empiricism and rationalism.

(Adapted from D. Hall, 1984).

2.2.2 HUMANISM

The emphasis on the systematic scientific approach caused a reaction in the 1970's in that many geographers believed that man should be at the centre of the subject, as geography is concerned with human problems and ought to help in the search for solutions to these. This added a further dimension to fieldwork approaches, that of the phenomenological approach. According to Hall (1982) this approach aims at activating students' feelings and involvement, promoting decision-making processes and understanding. The teaching strategies used are speculative, expressive, divergent and unpredictable. This unpredictability may lead to outcomes which are difficult to measure. Critics of the humanistic approach believed that much of the essential nature of geography was lost through overemphasis on the affective domain. Figure 2.2 compares a scientific systematic approach to inquiry with the phenomenological approach.

2.2.3 ENVIRONMENTALISM

Problems related to both the previously discussed approaches led geographers such as Preston-Whyte (1983) and Hall (1984) to perceive environmentalism as a unifying paradigm as it seeks to link human behaviour with the environment. Environmentalism bridges the gap between the natural sciences and the social sciences. It has also led to the origins of framework fieldwork (Hart and Thomas, 1986). Framework fieldwork involves looking at the ways people interact with the environment in which they live and work. Fieldwork therefore is seen as an essential, natural and active ingredient of all work done in geography. It is characterised by high student involvement and participation. Its mode of inquiry is oriented towards field research. A possible problem

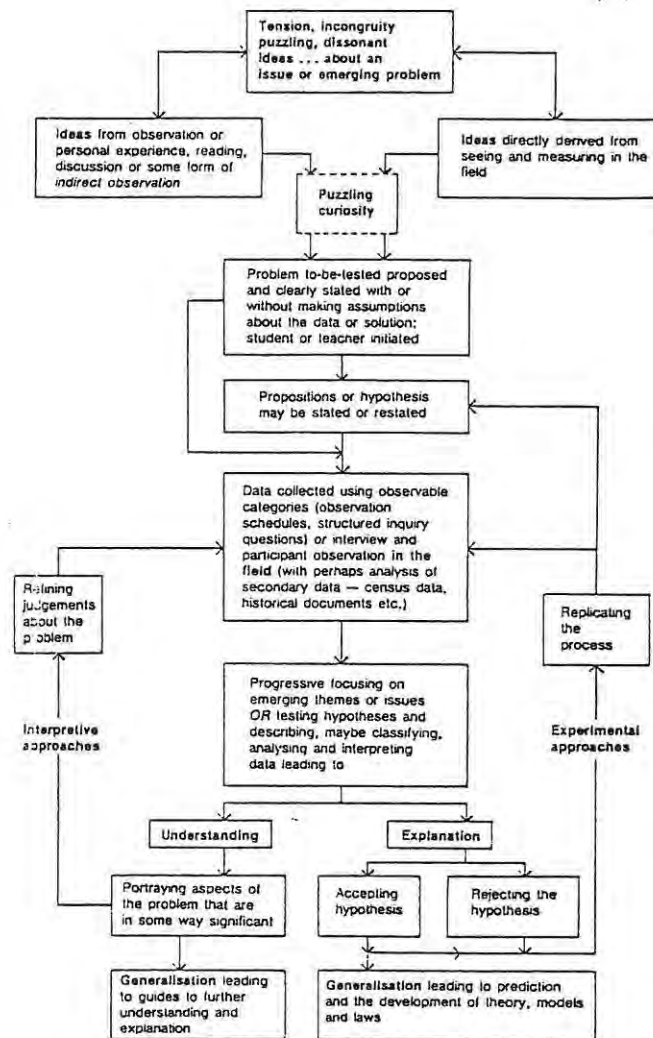


Figure 2.2 Qualitative and scientific models of inquiry in geography (after Bartlett and Cox, 1982).

of framework fieldwork is its multi-dimensional character, which may create difficulties for pupils having to cover the many facets that are involved. Figure 2.3 below depicts the ecological approach to knowledge while figure 2.4 depicts the methodology used for an inquiry based on the framework fieldwork mode. Figure 2.5 further shows the framework for fieldwork.

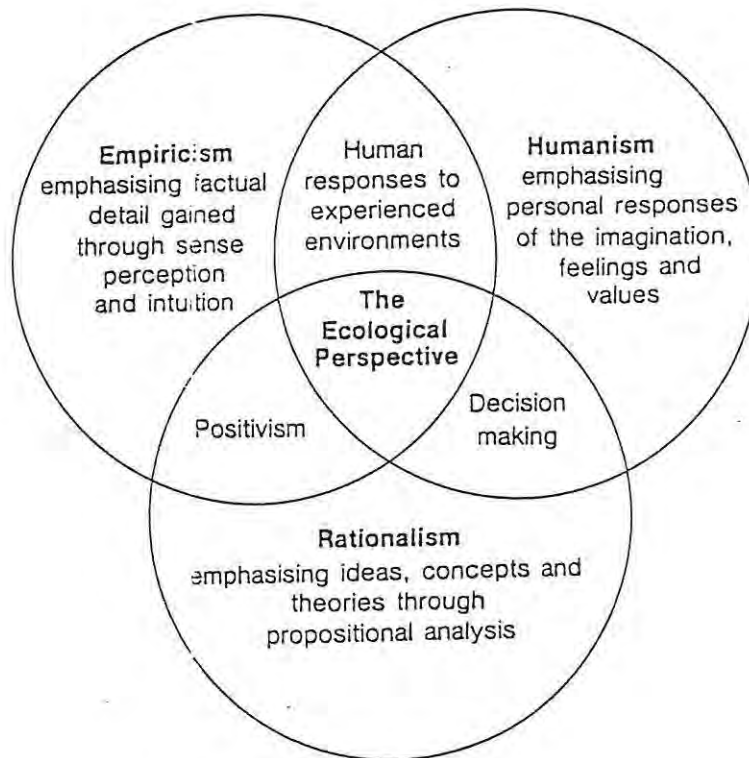


Figure 2.3 The ecological approach to knowledge.
(Adapted from D. Hall, 1984).

The paradigm shifts within geography over the past three decades have each had an important role to play in the evolution of the structure and approach to geographical education today. Geography currently emphasises the development of concepts, skills, values, and attitudes rather than mere facts. As a result of this emphasis fieldwork in the Geography Syllabus has moved from a descriptive teacher-centred activity (Figure 2.6) to an interpretative learner-centred activity (Figure 2.7).

2.3 GENERAL AIMS AND OBJECTIVES OF FIELDWORK

Fieldwork approaches are closely related to the move from the traditional objectives model to the current process model. The objectives model's central notion is the pre-specification of educational outcomes. This approach may make teaching and learning

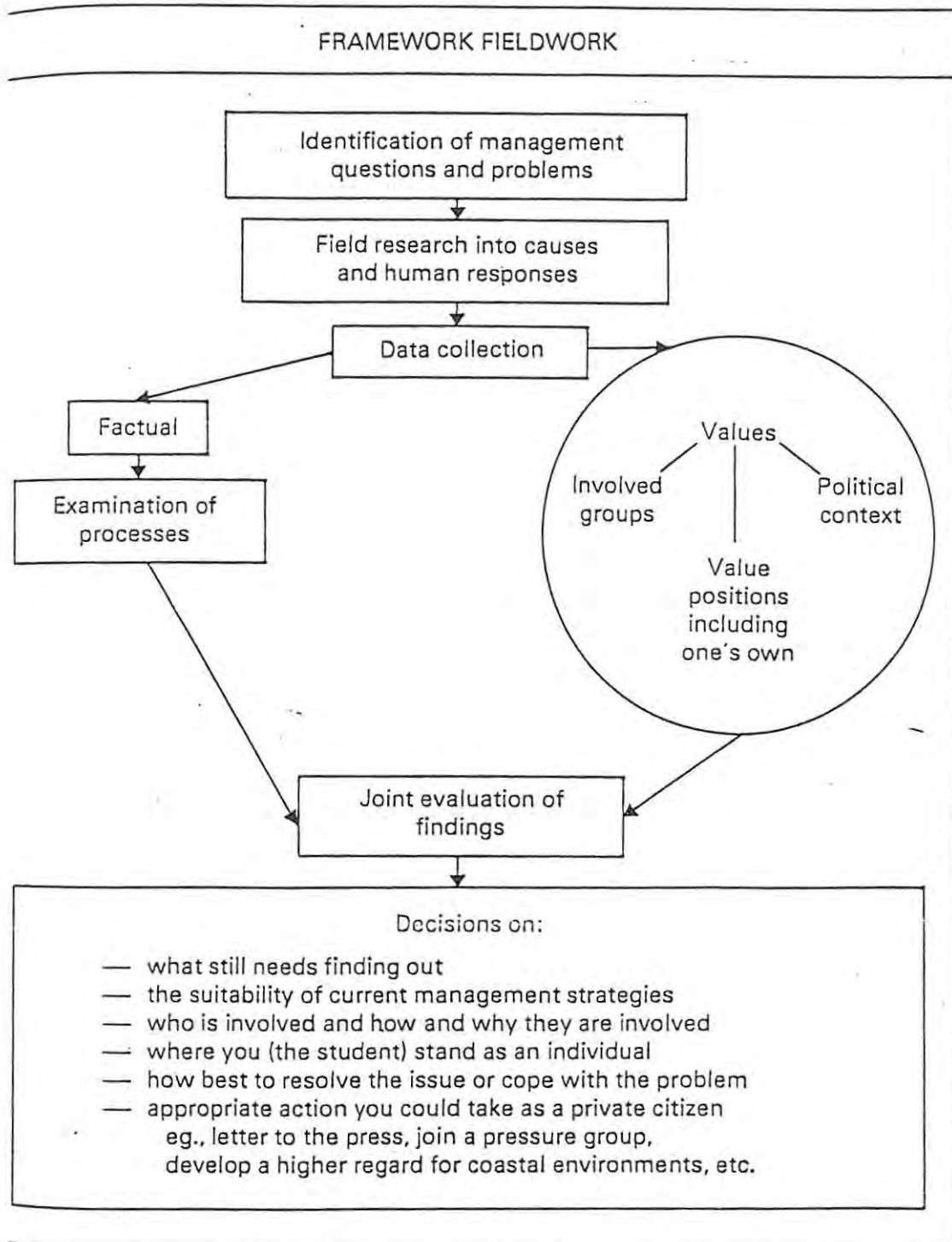


Figure 2.4 Framework Fieldwork.
(Adapted from Hart & Thomas, 1986).

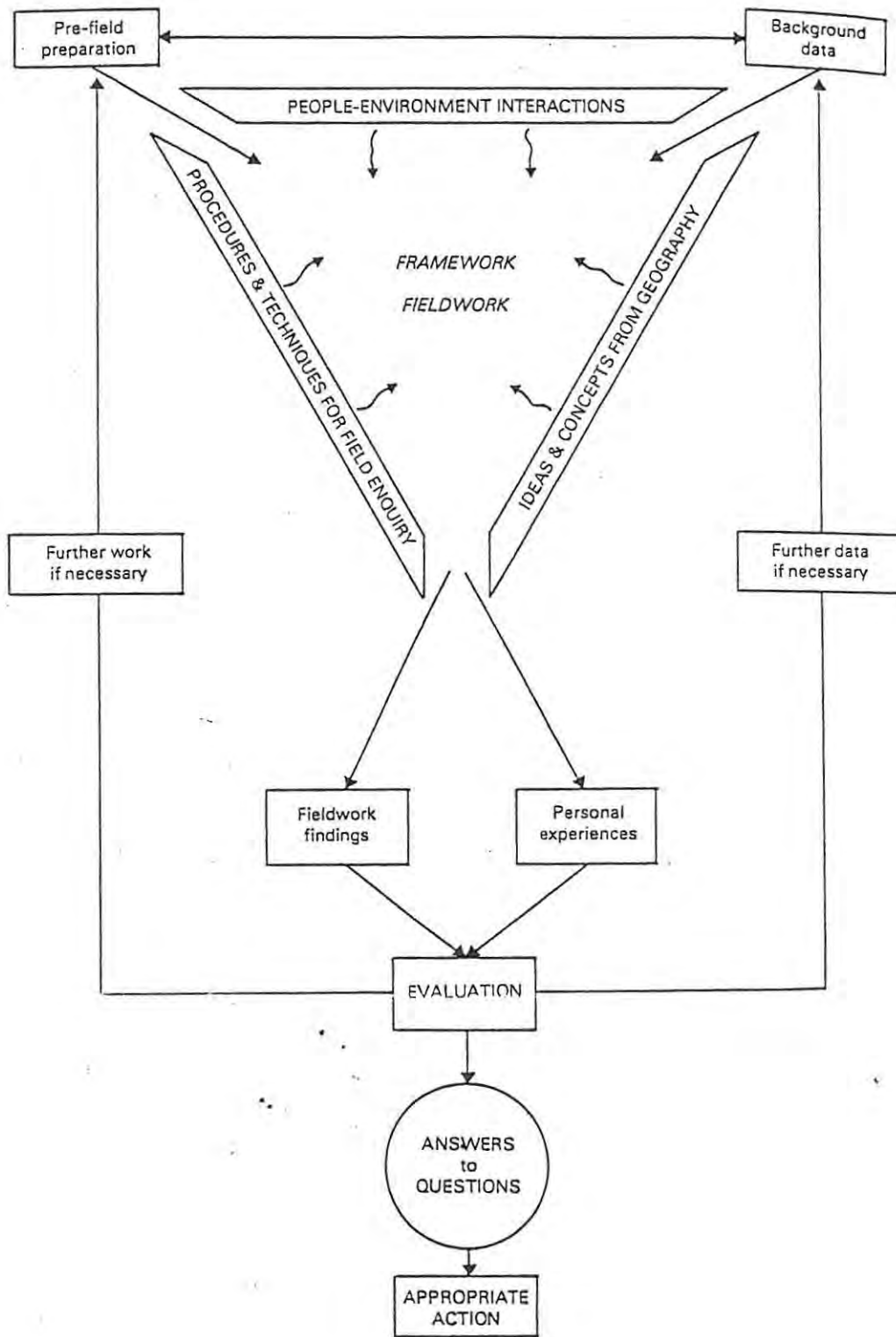


Figure 2.5 The framework for fieldwork. (Adapted from Hart & Thomas, 1986).

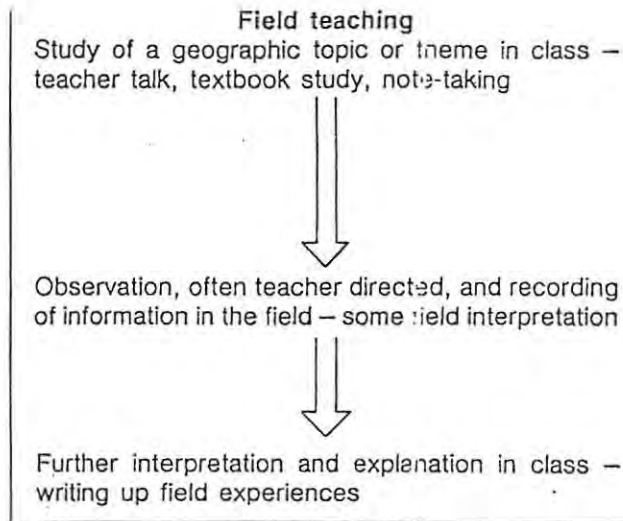


Figure 2.6 Traditional approach to Fieldwork. (Adapted from K. Laws, 1984).

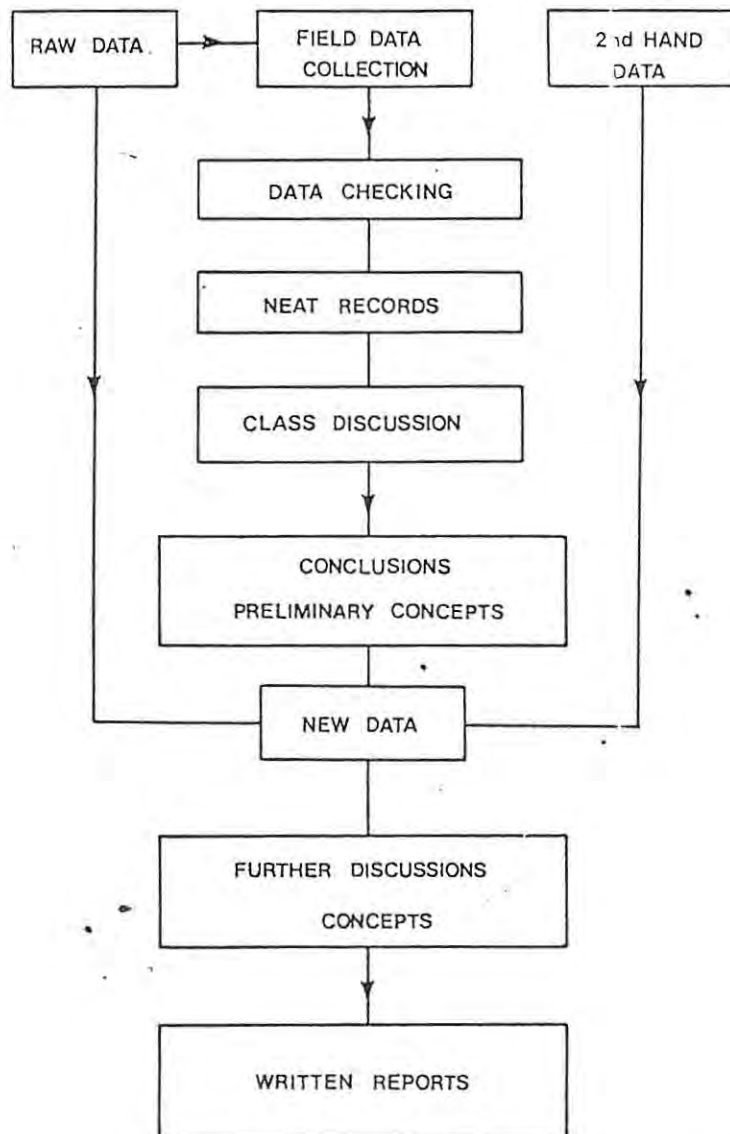


Figure 2.7 A model for fieldwork integration in class teaching. (Adapted from M. Marker, 1970).

rigid as the pre-specification of goals means that the teacher cannot make the most of opportunities which present themselves within the lesson. Fieldwork based on the objectives model would therefore focus on behavioural outcomes and would lose the benefits of unexpected results.

On the other hand the process model's central notion is that the teacher is not an expert but a learner along with his students. This implies teaching by inquiry and discovery. The teacher provides resources for learning and the learners take more responsibility for the acquisition of knowledge. Fieldwork approaches influenced by this model are not only concerned with problem-solving but also with the process of reaching solutions (Nightingale, 1977). This method of learning emphasises understanding by the learner. It must, however, be noted that while the process model is presently accepted as being educationally sound, the objectives model continues to have a role in fieldwork which lends itself to specific behavioural objectives.

Deer (1977) claims that the foremost reason for conducting fieldwork is because the syllabus prescribes it. Nicol (1980:1) concurs with this author in stating that, "there is sufficient motivation for fieldwork in the syllabuses to provide incentives for teachers to undertake this kind of activity...". The 1985 syllabus stresses that well planned and meaningful fieldwork should be undertaken, whenever possible. The proposed 1993 syllabus continues to place emphasis on the use of this strategy.

The primary aim, however, of fieldwork in the secondary school syllabus is to develop a sense of reality which allows pupils to

relate theory learnt in the classroom to the real world (Nicol, 1980). Fairgrieve claims that "Geography should be learnt through the soles of your boots" (in Long and Roberson, 1966:123). Fieldwork is furthermore perceived to enhance the development of concepts, skills and values which are at the heart of the general aims of the current syllabuses.

Educationists classify learning activities into three categories: the acquisition of skills, the learning of different levels of knowledge, and the development of attitudes.

Biddle (1973) supports the argument that fieldwork develops conceptual understanding when he claims that fieldwork can be used for teaching geographical vocabulary, transforming words into experiences. In other words fieldwork guards against the misinterpretation of words. This means that fieldwork gives meaning to the facts learnt in class and leads to understanding of both concrete and abstract concepts. By providing concrete experiences fieldwork sharpens geographic skills, develops interest and may foster a critical attitude.

Mills (1988) considers that pupils' cognitive skills are developed and refined as fieldwork and leads to perceptual and conceptual understanding. Through measuring and recording in the field the pupils' mathematical skills are improved and developed. The modern approach to fieldwork emphasises the identification of problems and problem-solving. Social relations may improve between pupils as they interact in the field. Fieldwork is also a means to develop a better understanding of the community at large. Fieldwork's value lies in the direct experiences which it provides

for the pupil. Affective skills are further developed through fieldwork as observation and understanding leads to an appreciation of the environment. Personal skills are also developed as the individuals are given an opportunity to draw conclusions and make decisions on their own.

Boardman (1986:129) emphasises that fieldwork produces children who are highly motivated, who show a positive attitude to learning, who maintain interest in their work, and display enthusiasm in investigating problems. Fieldwork can also promote growth in the individual in the sense that pupils are encouraged to accept responsibility in handling group situations; in representing the school to the public; in developing a set of values which represent responsible behaviour patterns (Mills, 1988).

2.4 THE ROLE OF FIELDWORK

According to Boardman (1986:129), "fieldwork educates children about the environment through the environment and for the environment". Gerrard (1988) claims that this teaching strategy enhances the understanding of one's local environment. The children learn experientially in a relationship of interdependence with the teacher and other pupils by sharing perceptions of reality, and refining these from insights gained (Brady, 1985:141). McElroy (1984) is of the opinion that fieldwork enhances students' ability especially when used with models, in the sense that the handling of models improves their understanding of the real world. Pearce (1987) claims that pupils learn best and retain information longer when they are excited, interested and involved, as is the case in fieldwork. This strategy also allows the pupils to work at their own pace and according to their abilities (Gerrard, 1988;

Nightingale, 1977). Marker (1970:68) claims that during fieldwork, "Learning becomes subconscious as all the senses are working simultaneously". Therefore knowledge gained becomes part of the child.

Finally, fieldwork may lead to positive results as the pupils can apply the theoretical knowledge they have learnt in the classroom. Bennetts (1986) claims that fieldwork can make pupils better geographers if it is conducted throughout the pupils' school career.

The teacher can use fieldwork to cover the syllabus as most concepts, theories and principles can be learnt in the field. In the field the staff and pupils come to know one another in a way almost impossible to achieve in class (Biddle, 1973). This is so because both parties learn together in a non-threatening environment. Beaumont and Williams (1983) claim that it may reduce disciplinary problems.

The value of fieldwork to the development of geography is immeasurable. Brady (1987:35) states, "there is not and there cannot be any substitute for the immediacy of field experiences". Nightingale (1977) furthermore claims that fieldwork makes the subject alive, as what is learnt is based upon the foundations of reality. As a teaching strategy it is educationally sound, and it promotes interdisciplinary learning. In the long term it can lead to greater concern for the environment in the community. Fieldwork

should therefore be an integral component of the geography course (Figure 2.8).

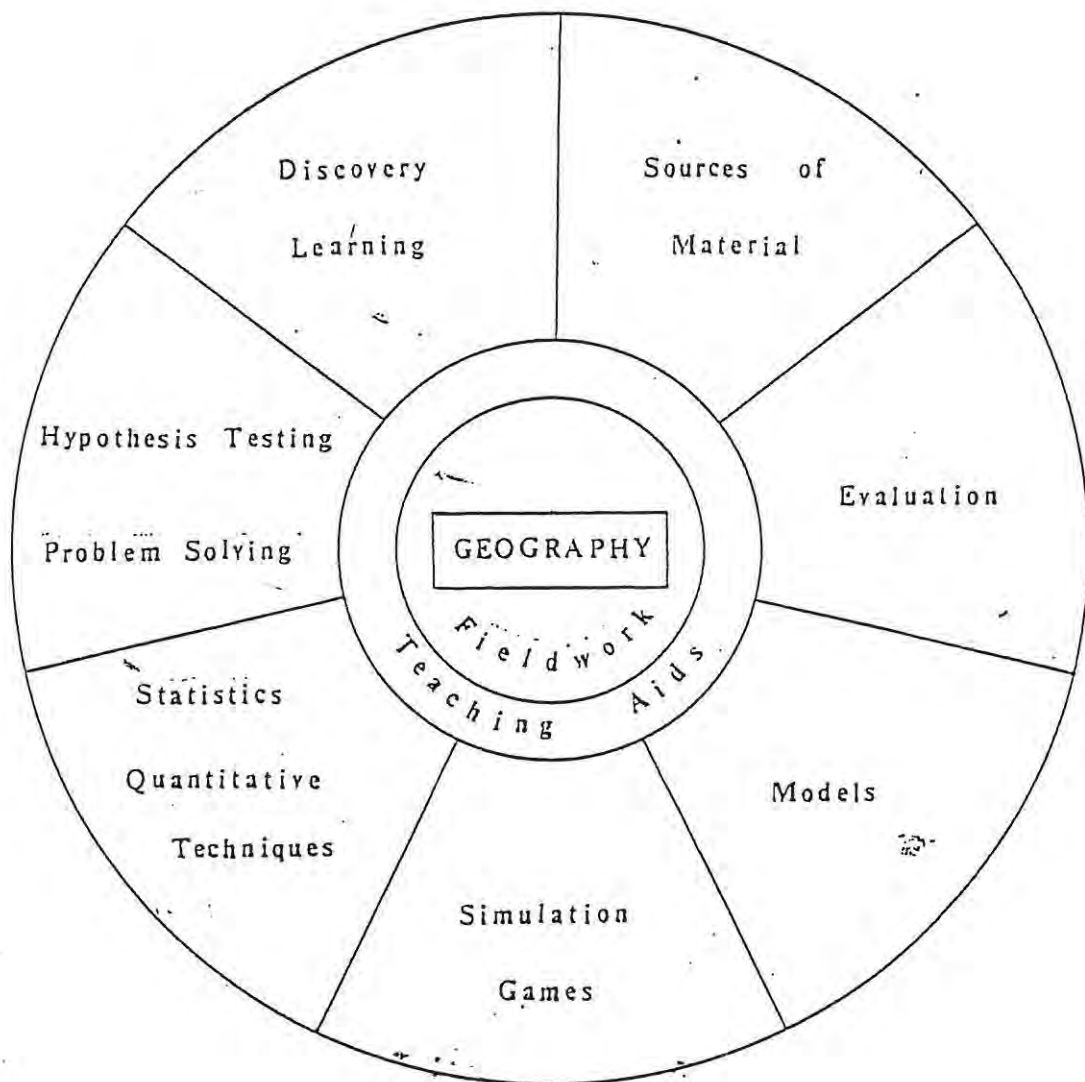


Figure 2.8 A Model of Teaching Strategies for Geography Teaching in the 1980's in South Africa.
(Adapted from R. Ledger, 1977).

2.5 THE DEVELOPMENT OF FIELDWORK IN THE SCHOOL SYLLABUS

While fieldwork is not new to school geography, its emphasis has shifted from a descriptive teacher-centred approach to an interpretative learner-centred approach. This approach resulted from the 'new' geography of the 1970's. Beaumont and Williams

1983) reveal how quantitative approaches in the school filtered through from higher educational institutions. Current school geography syllabuses are designed to present the discipline as a systematic science which is concerned with explanation rather than description. A characteristic feature of geography at school level has therefore been to bridge the gap between secondary and tertiary education. Thus the introduction of fieldwork as an intrinsic part of the new approach to geography was seen to play a vital role in this respect.

2.5.1 FIELDWORK IN SOUTH AFRICA

Although geography teachers in South African schools were urged to encourage their pupils to become familiar with their immediate environment as early as 1898, fieldwork was prescribed for the first time in South African syllabuses in 1973. In 1977 Nightingale stressed the importance of this strategy for teaching. His research explores possible approaches to fieldwork in a South African context. Webster in 1979 showed that a wide variety of topics in the geography syllabus can be field-oriented, and he emphasised the role of fieldwork in the development of the skills required by the 1973 syllabus. Marker (1970) further emphasised that most, if not all, sections in the geography syllabus can be learnt through fieldwork. Nightingale (1981) revealed the value of fieldwork for the interpretation and understanding of the various components of the landscape, while Levy (1984) saw fieldwork as embracing all other teaching methods in geography to a greater or lesser extent. Despite the emphasis on fieldwork in South African school syllabuses since 1973, research reveals that

fieldwork is neither universally nor uniformly implemented in schools.

2.5.2 FIELDWORK IN TRANSKEI

A literature search has revealed that no studies have been undertaken to investigate the position of fieldwork in Transkeian schools. Since independence Transkei schools have continued to use the Joint Matriculation Board core syllabuses. The geography syllabus used in Transkei Secondary Schools is therefore the same as that prescribed for the Cape Education Department. Fieldwork must therefore be accepted as an integral part of the Transkei School geography syllabus.

2.6 FACTORS WHICH INFLUENCE THE IMPLEMENTATION OF FIELDWORK IN SOUTH AFRICAN SCHOOLS

Nightingale (1977) distinguishes between two major categories of constraints to the implementation of fieldwork, namely, logistic and educational constraints. Logistic constraints include limitations imposed by time, cost factors, zoning restrictions, etc. Educational constraints include the constraints imposed by public examinations and those resulting from lack of teacher expertise. Nightingale (1977) suggests that many of the problems associated with the implementation of fieldwork can be overcome through the use of the immediate school environment and local environment. Problems relating to teacher expertise may be overcome through better teacher training programmes and the development of in-service courses.

2.7 SUMMARY

The exponents of fieldwork unanimously agree that fieldwork is an

essential part of any geographical course as it places the pupil in contact with reality beyond the confines of the classroom. It has been argued that outdoor experiences provide a basis for the development of concepts and attitudes, help to equip pupils with an array of skills, and enable them to become concerned with issues.

Reference to the need for progression in the development of geographic skills and concepts through fieldwork has been made. The important contribution that fieldwork has made in developing concepts has been emphasised.

CHAPTER 3

3. RESEARCH METHODOLOGY

3.1 INTRODUCTION

The purpose of this study was to investigate student teachers' perceptions of fieldwork in their own College studies and as a teaching strategy. In order to identify the degree to which these students have been exposed to fieldwork it was necessary to gain clarity with respect to the following:

- i) student teachers' experiences in school fieldwork;
- ii) the extent to which geographical fieldwork experiences are incorporated into College of Education geography courses;
- iii) student teachers' perceptions of the value of fieldwork;
- iv) student teachers' perceptions of problems related to conducting fieldwork in geography.

The above information provides a basis upon which to develop a meaningful and effective training programme for student teachers in respect of fieldwork.

A survey was considered to be the most appropriate method to obtain an understanding of the present situation in which the student teachers find themselves with regard to field experiences. According to Cohen and Manion (1985:97) a survey is an intentional method of gathering data aiming at describing the nature of existing conditions, or identifying standards against which existing conditions can be compared, or determining the relationships that exist between specific events.

The major purpose of a survey is to collect information using one or more data gathering techniques. Surveys enable the researcher to obtain information directly from the respondents. This information may relate to facts, opinions, or behaviour. Dane (1990:21) claims that "...whenever you want to know what people are thinking ... survey methods can be used". Surveys allow widespread opinion to be ascertained and are a common and scientifically acceptable means of studying individuals under natural conditions (Ballantyne, 1986).

The term 'attitude' has been defined in a variety of ways but with little agreement upon its explicit meaning. In most cases attitudes are associated with how people think and behave. For the purpose of this study Secord and Backman's definition (in Ballantyne, 1986:87) is adopted. This definition identifies attitudes as "...certain regularities of an individual's feelings, thoughts and predispositions to act towards some aspect of his environment".

The above definition has been selected for the following reasons. This view conceptualises attitudes as consisting of three components, namely, cognitive, affective, and conative. The cognitive component is the knowledge which a person has about particular phenomena, the affective component reflects the positive or negative feelings which a person has towards a particular factor, while the conative component is the behavioural tendency that a person has in relation to particular phenomena.

The above definition applied to the study therefore provided guidelines which helped to identify the extent of the student

teachers' knowledge about fieldwork, the value which they attach to fieldwork as a teaching strategy, and their reactions to the implementation of fieldwork in the light of current field approaches.

The most commonly used instruments for the gathering of data in educational research surveys are interviews, questionnaires and controlled observation (Wiersma, 1986). For the purpose of this study the survey consisted of a questionnaire and semi-structured interviews.

3.2 THE ORGANISATION AND ADMINISTRATION OF A QUESTIONNAIRE

According to Sanders and Pinhey (1983:91), a questionnaire is "...a form or document that contains a set of questions, the answers to which are to be provided personally by respondents". Questionnaires can either be posted to the respondents to complete or are completed under the supervision of the researcher (Gay, 1987; Dane, 1990). Questionnaires may be composed of closed or open-ended questions, or both. Structured questions are specific, they need no elaboration and in most cases the alternatives are listed. On the other hand unstructured questions "...tend to generate more detailed and individualistic responses from the persons we are interviewing" (Sanders and Pinhey, 1983:82).

The major advantage of structured questions is that they facilitate answering, are easy to code and analyse and are objective. The main disadvantage of structured questions is that the researcher cannot probe the respondents' feelings, attitudes and opinions. This type of question may not give a true reflection of the respondents' feelings as the chances of guessing are high and the

options given may be limited. Unstructured questions, while being more time-consuming to answer, are advantageous in the sense that they allow the respondents to give their own views. Such questions, however, pose a major problem for analysis as responses may be vague and difficult to understand. In an attempt to gain maximum benefit from the questionnaires this study employed both closed and open-ended questions.

Questionnaires are however not without problems. Hopkins (1985) considers some of the general advantages and disadvantages of questionnaires. He cites the advantages as their being highly specific and easy to administer. The identified disadvantages include the fact that they are time-consuming to develop, as care needs to be taken to avoid ambiguity and unnecessary reading time. They are furthermore prone to problems which emanate from respondents attempting to give a 'right answer' rather than expressing their true opinions. A more serious problem identified is that of validity and reliability (Cohen and Manion, 1985). Reliability refers to the consistency of an instrument in measuring what it claims to measure, that is, the same results must be produced when measuring the same thing (Wiersma, 1980). According to Sanders and Pinhey (1983:91) validity refers to "the correspondence between what a measuring device is supposed to measure and what it really measures". An instrument will therefore be valid if its results can be accurately interpreted and the generalisations it produces reliably reflect what it seeks to measure in the entire population.

In an attempt to avoid the above-mentioned problems,

i) a pilot study was conducted prior to the main survey;

ii) semi-structured interviews were conducted to solve problems that arose from the questionnaire.

The latter method was used in an attempt to increase the validity and reliability of the survey. Tuckman (1972:293) claims that interviews can be used to follow-up unexpected results, to validate other methods or to go deeper into the motivations of respondents and their reasons for responding as they did.

Another way of reducing problems associated with questionnaires is to ensure that the sample is representative. Cohen and Manion (1985) suggest that the size of the sample should be not less than 30% of the population. In trying to avoid problems relating to sample size the researcher attempted to select 50% of the one hundred and eighty students specialising in geography at Colleges of Education in Transkei.

For the purpose of this study convenience sampling was used. Convenience sampling involves "...choosing the nearest individuals to serve as respondents..." (Cohen and Manion, 1985:103), and is thus "selection based on availability or ease of inclusion" (Dane, 1990:302). One of the factors which must be considered when choosing the sample population is accessibility. Respondents were therefore selected from those Colleges of Education most accessible to the researcher. The disadvantage of this method is that it may reduce the chances of selection of the typical in terms of the target population.

The population for the study comprised third year student teachers specialising in geography in Transkeian Colleges of Education. The

third year geography specialists were chosen for the following reasons:

- i) as they are completing their course they are expected to have sufficient background in terms of the teaching strategies appropriate to the subject;
- ii) they have practical teaching experience and are the students most likely to have been exposed to fieldwork;
- iii) they constitute a sample suited to the restricted scope of a study of this nature.

There are thirteen Colleges of Education in Transkei (Table 3.1). Of the thirteen colleges seven offer a Secondary Teachers Diploma (STD) and six offer a Primary Teachers Diploma (PTD). Only the STD Colleges participated in the study as they offer specialisation in two subjects in the subject curriculum to the third year level.

Table 3.1
STD TRANSKEIAN COLLEGES OF EDUCATION
STD : THIRD YEAR GEOGRAPHY SPECIALISTS

Name of the College	Number on roll
1. Transkei College of Education	08
2. Butterworth College of Education	50
3. Bethel College of Education	06
4. Clarkebury College of Education	44
5. Lumko College of Education	19
6. Maluti College of Education	30
7. Clysedale College of Education	<u>23</u>
Total	<u>180</u>

On the basis of the criteria used to select the survey population, eighty-three third year students from four Colleges of Education participated in the survey, thus representing 46% of the total number of third year geography specialists at Colleges of Education in Transkei. The researcher personally administered the questionnaire to avoid the problem of low returns. Sixty-one of eighty-three questionnaires were completed (Table 4.2). This was due to unrest at one of the Colleges (04) and the fact that some of the student teachers were absent on the dates of the survey. This comprised a return rate of 74%. The final survey population represented 34% of the total number of third year students specialising in geography in Colleges of Education.

Table 3.2

PARTICIPATING COLLEGES AND THE NUMBER OF COMPLETED RESPONSES

COLLEGE	NO. ON ROLL	RETURNED NO. OF RESPONSES
01	50	29
02	19	18
03	06	06
04	08	08
TOTAL:	83	61

The implementation of the questionnaire was preceded by a pilot survey involving forty-four students from Clarkebury College of Education. This college was chosen since the researcher lectures here. The student teachers at this College were not part of the sample though part of the population. A problem which emerged from the pilot study was that student teachers experienced difficulty

in understanding the rated questions. This further emphasised the need for the researcher to administer the questionnaire as this system could be explained.

The administration of the questionnaire was done as follows. Before visiting the Colleges of Education the researcher had to seek permission from the Department of Education to conduct the survey in Transkeian Colleges. With the permission granted, the researcher telephoned the Rectors of the Colleges concerned to seek permission to visit the Colleges and to make appointments with the subject lecturers. The researcher arranged a convenient time to administer the questionnaire so that it did not coincide with the mid-year or end of the year examinations. The survey was therefore conducted at the beginning of May 1991, and it included all third year student teachers specialising in geography at the selected Colleges.

This study highlighted general problems relating to the administration of questionnaires, which included:

- i) respondents not reading and following the instructions correctly;
- ii) sections of the questionnaire being answered incompletely;
- iii) respondents not giving sufficient thought to the individual question items;
- iv) vague answers and the respondents' discussion of the questions among each other before answering questions;
- v) a specific difficulty experienced by this study was the difficulty of designing a questionnaire for second-language speakers.

Interviews were used in an attempt to reduce the problems discussed above.

3.3 THE INTERVIEWS

An interview is generally defined as a conversation with a purpose (Walker, 1985). Dane (1990) narrows the scope of the term, claiming that interviews are structured conversations used to complete a survey. For the purpose of this study Cohen and Manion's (1985:219) definition is used. Cohen and Manion claim that an interview is "...a 'two person' conversation initiated by the interviewer for the specific purpose of obtaining research-relevant information". Dane (1990:14) claims that, "If we are interested in perceptions, interviews may be just the method to use...". Furthermore, "by providing access to what is 'inside a person's head', these approaches make it possible to measure what a person knows (knowledge or information), what a person likes and dislikes (values and preferences), and what a person thinks (attitudes and beliefs)" (Tuckman, 1972:173).

In terms of design, interviews can either be structured, semi-structured or unstructured (Burroughs, 1975). Structured interviews involve set questions which are asked and the answers are recorded on a schedule. In semi-structured interviews the researcher poses predetermined questions supported by follow-up questions. The advantage of structured interviews is that they can be easily coded for purposes of analysis and their uniformity of measurement provides greater reliability. On the other hand they lack depth and sometimes the respondents are restricted to alternatives that may not suit them. Flexibility is the main advantage of semi-structured interviews as the interviewer is able

to probe further to eradicate misunderstandings. This flexibility may be a disadvantage as not all respondents are necessarily asked the same questions which may reduce the validity of the interview.

Generally interviews are time-consuming and expensive, however, they have a high reliability though their validity is lower than that of questionnaires. For the purpose of this study semi-structured interviews were employed because they are more flexible and reliable when compared with unstructured and structured interviews (Burroughs, 1975).

Not all the students who completed the questionnaire were to be interviewed. The interview sample included 22% of the survey population. Student teachers were randomly chosen from the main survey sample. This method provided an equal chance for every member in the sample to be chosen. Fourteen student teachers were interviewed from three of the Colleges. Group interviews were prepared as individual interviews tend to inhibit the interviewee (Sanders and Pinhey, 1983).

3.4 DATA ANALYSIS

The survey data was analysed in the following manner:

- i) the closed questions of the questionnaire were analysed by means of computation and the resultant information was presented either in the form of percentages or according to the mean values. The mean values were calculated for all questions which used the Likert type scales in order to reveal trends for the sub-sets. Comparisons of responses between the subsets were analysed by means of the Chi square test (95%)

to establish statistically significant differences between the various groups;

- ii) the open-ended questions of the questionnaire and the interviews were transcribed and analysed.

3.5 LIMITATIONS OF THE SURVEY

This survey is perceived to have the following limitations:

- i) Greater reliability and validity would have resulted had it been possible to include all third year geography specialists in all Colleges of Education in Transkei.
- ii) Unrest-related problems reduced the returns of the questionnaire and while the survey population is acceptable in terms of Cohen and Manion's (1985) criteria, the researcher would have preferred a higher return.

3.6 SUMMARY

A survey method was chosen to gather information pertinent to the goals of the research. In an attempt to reduce the problems of reliability and validity two research instruments were employed, a questionnaire and semi-structured interviews.

To avoid the problems of low return the researcher personally administered the questionnaires. The survey was designed to provide a basis on which to argue for the increased use of pupil-centred teaching strategies.

CHAPTER 4

PHASE 1 : RESULTS OF THE QUESTIONNAIRE

4.1 INTRODUCTION

The data reflected in this chapter was collected as a means to establish College of Education students' perceptions of and experiences in geographical fieldwork. A questionnaire and a series of follow-up interviews were used to gather the necessary data. The questionnaire which was the major tool for collecting data was organised into five sections:

- i) The first section was designed to establish the composition of the survey group.
- ii) The second attempted to identify the respondents' exposure to fieldwork while at school as well as the extent of their involvement in geographical fieldwork in the course of their teacher training programme.
- iii) The final three sections of the questionnaire attempted to establish student teachers' perceptions relating to the value, organisation and management of fieldwork, as well as the problems they perceived to be associated with the implementation of fieldwork.

The questionnaire involved sixty-one Secondary School geography specialists drawn from four Colleges of Education in Transkei. This figure represented 34% of the total number of geography specialists in Colleges of Education in Transkei. It is noteworthy that geography specialists represented 11,7% of the total number of third year student teachers enrolled at Colleges of Education in Transkei in 1991.

The results of the survey are presented in the following manner:

Phase I The results and analysis of the questionnaire;

Phase II The results and analysis of the interviews.

The results gathered from the questionnaire are presented in this chapter according to the order in which the questionnaire was arranged.

4.2 RESULTS AND ANALYSIS OF THE QUESTIONNAIRE

4.2.1 THE COMPOSITION OF THE SURVEY POPULATION

This information has been summarised in Table 4.1 and Figure 4.1.

Table 4.1

THE COMPOSITION OF THE SURVEY GROUP (Expressed as Percentages)

ITEM	P E R C E N T A G E S					
	a. Sex	Male	50.0	Female	50.0	
b. Residence	Rural	82.5	Urban	17.5		
c. School area	Rural	86.0	Urban	14.0		
d. School type	Private	3.6	Missionary	3.6	State	92.8
e. Colleges	01	47.5	02	29.5	03	9.8
					04	13.1
f. Age	20	21-22	23-24	25-26	27-28	29-35
	12.3	35.1	22.8	21.8	3.5	5.3
g. Employment	Yes	19.0	No	81.0		

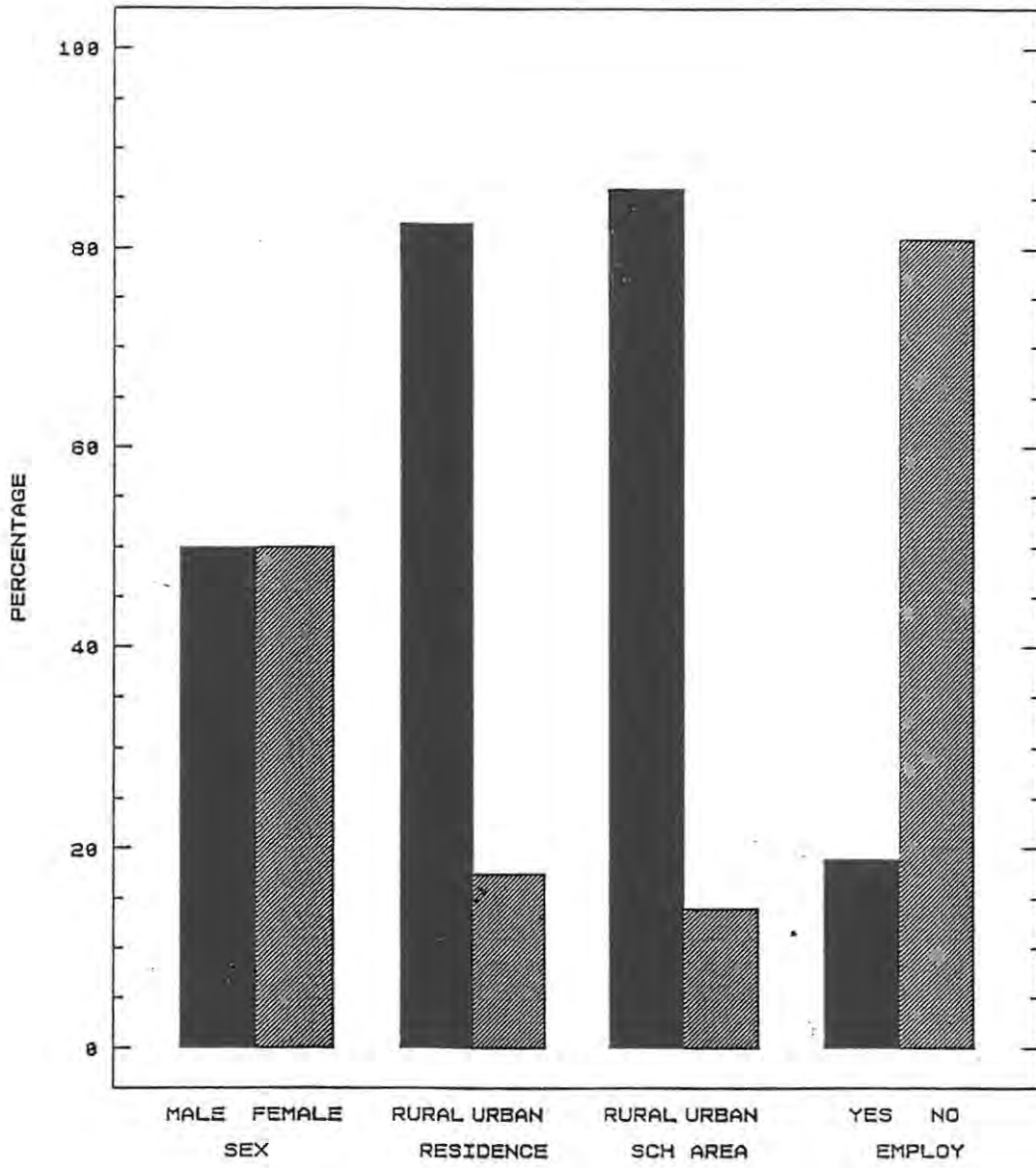


Figure 4.1 Composition of the Survey Population.

Section A of the questionnaire revealed that the respondents included an equal number of males and females. The information is interesting in view of Ballantyne's research which indicated that geography teachers employed by the Cape Education Department tended to be males (1986). The survey furthermore revealed that the majority of the respondents grew up in the rural areas of Transkei (82,5%). The majority (86,0%) of the respondents also attended rural schools (Figure 4.1). Most of the schools in Transkei are state controlled. This is borne out by the results which revealed that the majority of the respondents attended state schools (92,89%) (Figure 4.2).

The respondents' ages ranged between 19 and 35 years. The majority of the third year student teachers at the Colleges of Education are, however, between 21 and 22 years old. Figure 4.3 shows the age range of the respondents.

Of the four Colleges that participated in the survey two were situated in the urban areas of Umtata and Butterworth, i.e. Colleges 01 and 04, while the other two were located within rural communities, i.e. Colleges 02 and 03. The number of student teachers specialising in geography at the urban Colleges of Education was larger (60,6%) than those in rural Colleges (39,4%). The information in Table 4.2 indicates the enrolment of Secondary School geography specialists at the various Colleges and where they are situated.

Table 4.2

ENROLMENT AND SITUATION OF THE FOUR PARTICIPATING COLLEGES

COLLEGES	AREA	GEOGRAPHY SPECIALISTS	%
01	Urban	50	47,5
02	Rural	19	29,5
03	Rural	06	9,8
04	Urban	08	13,1
		83	100

The results reveal that 19,0% of the respondents had some previous employment prior to their entry into tertiary education. While this is a relatively low percentage it is nevertheless a reflection of the problems students experience in the developing countries with regard to financial support for tertiary education.

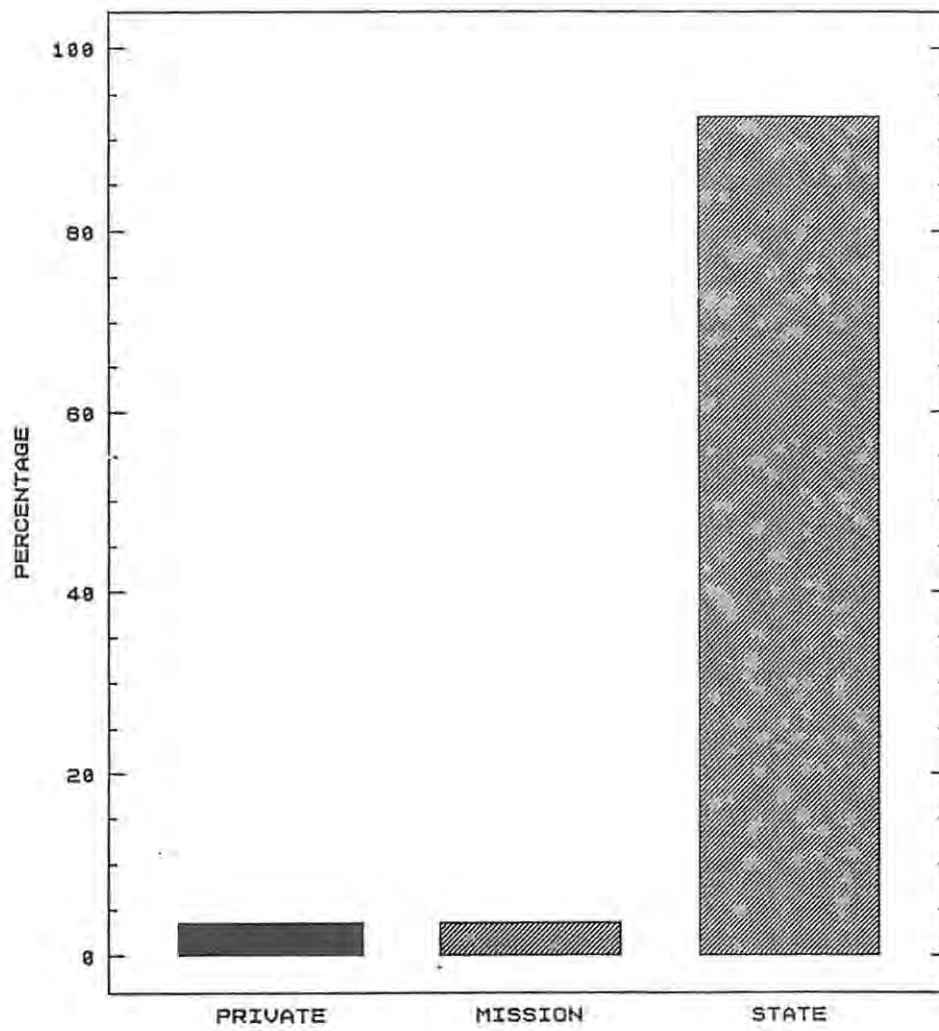


Figure 4.2 Distribution of Respondents in Transkeian Schools.

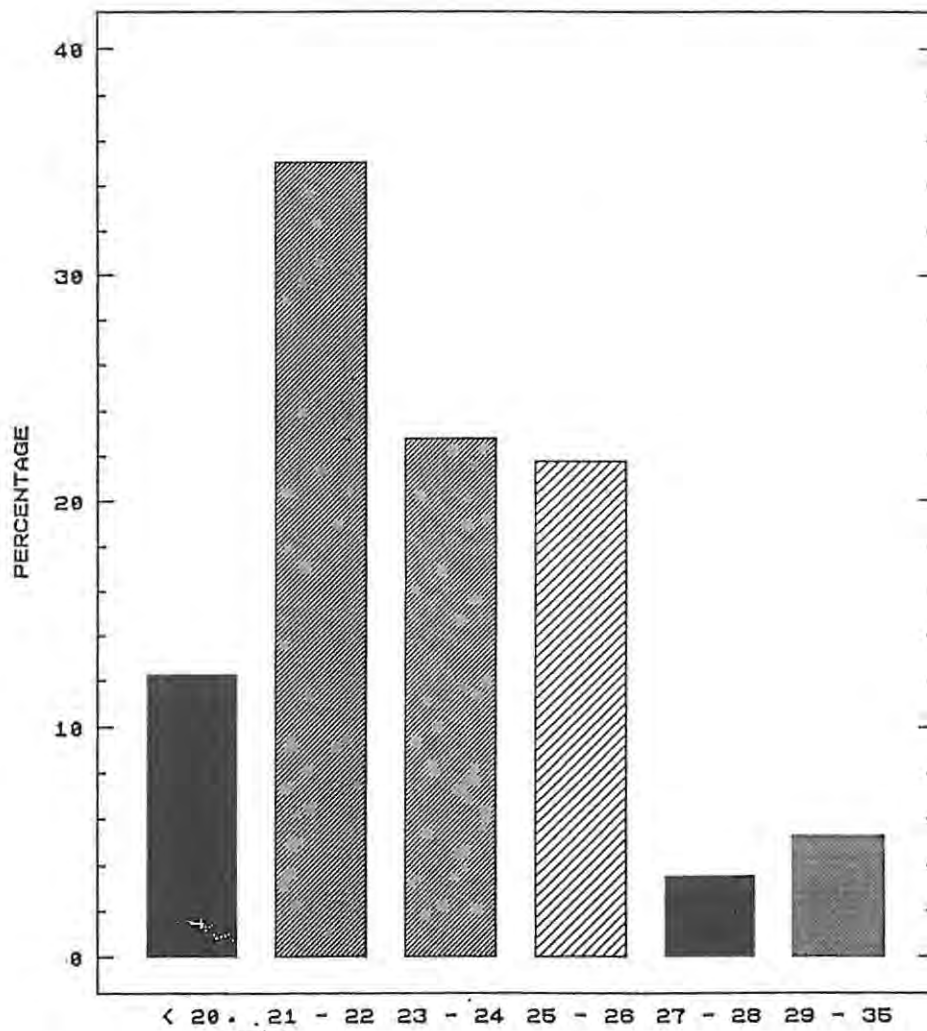


Figure 4.3 Age Range of the Respondents.

The second part of this section reveals how the respondents were distributed within the various subsets (Table 4.3).

Table 4.3
DISTRIBUTION OF THE SURVEY POPULATION

ITEM	P E R C E N T A G E							
a. Sex	MALE			FEMALE				
	Rural	Urban		Rural	Urban			
	49.0	50.0		51.0	50.0			
b. Residence	RURAL			URBAN				
	Male	Female		Male	Female			
	53.2	46.8		30.0	70.0			
c. Schooling	PRIVATE		MISSIONARY		STATE			
	Male	Female	Male	Female	Male	Female		
	0.0	100.0	100.0	0.0	48.1	51.9		
	Rural	Urban	Rural	Urban	Rural	Urban		
	4.2	0.0	4.2	0.0	84.6	15.4		
d. Colleges	01		02		03		04	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
	57.4	20.0	21.3	40.0	8.5	20.0	12.8	20.0
e. Employment	YES			NO				
	Rural	Urban		Urban	Rural			
	Male	Female		Male	Female			
	80.0	20.0		43.2	56.8			

The information revealed by Figure 4.4 indicates that there were more males than females at Colleges 01, 02 and 04 and that there were no males at College 03. While males and females were evenly distributed throughout the survey population there were more males in the urban Colleges than females.

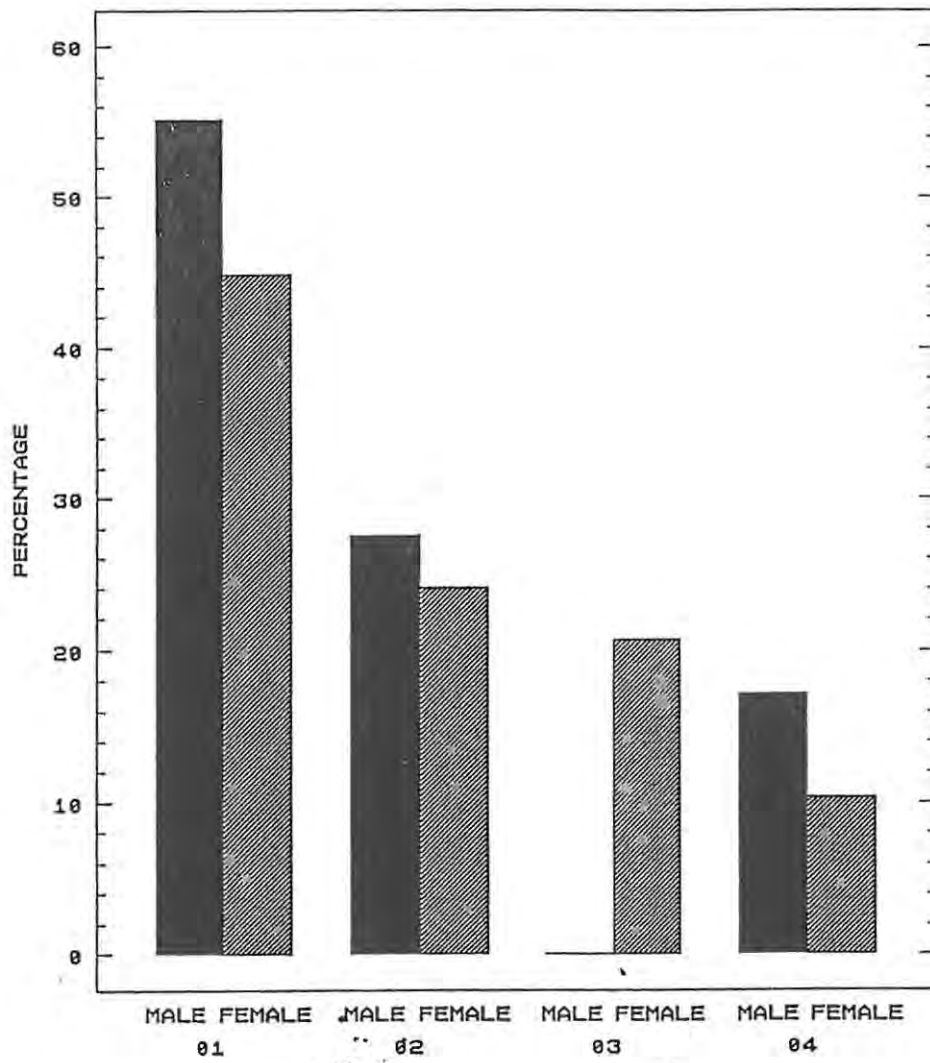


Figure 4.4 Sex Distribution of Respondents at Colleges of Education.

The analysis of the respondents' residential origins at the various Colleges revealed that students from the urban areas tend to study at Colleges in rural areas while rural students tend to enroll at urban Colleges of Education (Figure 4.5).

The results also reveal that the highest number of the respondents who had been employed before embarking on tertiary education were from rural areas, the majority being males (80,0%). This is a feature of migratory labour which is characteristic of developing countries. Figure 4.5 shows the residence of respondents.

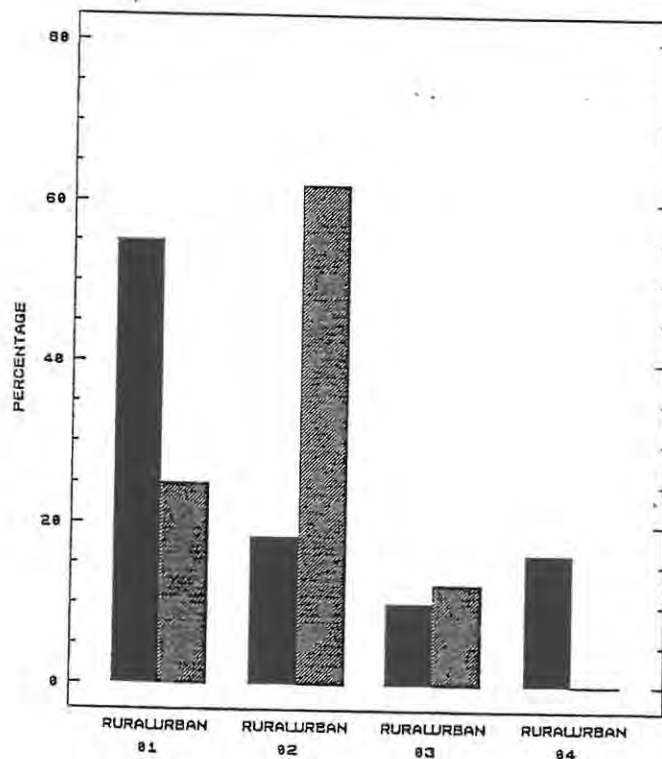


Figure 4.5 Residence of Respondents

4.2.2 RESPONDENTS' FIELDWORK EXPERIENCES

This section of the questionnaire attempted to establish the extent of the respondents' involvement in fieldwork. Table 4.4 presents the extent of the respondents' fieldwork experiences while at school.

Table 4.4
RESPONDENTS' FIELDWORK EXPERIENCES WHILE AT SCHOOL

I T E M	YES		NO	
	NUMBER	%	NUMBER	%
2.1 School Fieldwork Experience	12	19.0	49	81.0
2.2 a. Primary level	2	3.7	59	96.3
b. Secondary level	9	14.0	52	86.0
c. Senior Secondary level	6	9.3	55	90.7
2.3 a. Visit - museum	4	7.0	57	93.0
b. Visit - nature reserve	6	10.5	55	89.5
c. Visit - beach area	5	8.6	56	91.4
d. Visit - forest area	2	3.6	59	96.4
e. Visit - river area	6	10.7	54	89.3
f. Visit - distant town	6	10.5	55	89.5
2.4 a. Slope study	3	5.4	58	94.6
b. Soil study	2	3.6	59	96.4
c. Rock study	7	10.7	54	89.3
d. Farm study	2	3.6	59	96.4
e. School trail	0	0.0	61	100.0
f. Residential area	2	3.7	59	96.3
g. Urban study	1	1.9	60	98.1
2.5 a. Listening to talks	5	10.9	54	89.1
b. Observe and record	8	12.7	53	87.3
c. Recording measurements	5	7.5	56	92.5
d. Completing worksheets	5	7.4	56	92.6
e. Interviewing people	3	5.6	58	94.4
f. Doing field sketches	5	7.4	56	92.5
g. Doing traffic counts	0	0.0	55	90.7
h. Soil and rock sampling	6	9.3	55	90.7
i. Taking photographs	6	9.4	61	

4.2.2.1 FIELDWORK EXPERIENCES WHILE AT SCHOOL

The most significant aspect of this section of the questionnaire (2.1 - 3.9) is the respondents' lack of fieldwork experience. Only 19,0% of the respondents had been exposed to fieldwork while at school. The results revealed that 14,9% of the respondents had undertaken fieldwork while at Secondary school while 3,7% were exposed to this aspect of geographical education at primary level. The number of students who had been exposed to fieldwork dropped to 9,3% at Senior Secondary level.

Questions (2.3, 2.4, 2.5, 3.4) relating to the choice of field sites, the form which the studies took and the actual activities in which students were engaged revealed the following:

- i) Field studies tended to include visits to a river area, nature reserve, distant town or a beach. The structuring of field excursions which do occur in Transkeian schools is apparently more directly related to visits to places of interest than to actual studies which can be directly related to aspects of the syllabus.
- ii) Generally fewer than 5% of the respondents had been involved in local studies relating to an understanding of soils, slopes, study of a farm, or urban study.
- iii) Particularly noteworthy is the fact that none of the students had experienced practical fieldwork within their own school grounds. This highlights the fact that teachers in Transkei schools are unaware of the value of the immediate environment for the development of field skills or as a teaching strategy.
- iv) A further factor of importance is that fieldwork activities were primarily based on observation, recording and teaching-in-the-field. Very few of the students who had been exposed

to fieldwork while at school were involved in activities designed to develop higher cognitive skills or affective skills. Furthermore field activities in Transkei, where implemented, do not apparently focus on the development of numeracy or graphicacy. Thus fieldwork is poorly perceived by teachers as a means to develop skills.

The number of responses to the unstructured questions (2.6 - 7.3) which were included are summarised in Table 4.5.

Table 4.5

A SUMMARY OF THE NUMBER OF RESPONSES TO UNSTRUCTURED ITEMS

ITEM	NO. OF RESPONDENTS	%
2.6	08	13.1
2.7	06	9.8
2.10	11	18.0
3.5	07	11.5
3.6	04	6.6
3.9	06	9.8
5.2	50	82.0
5.4	42	68.9
5.6	37	60.7
7.3	30	49.2

The open-ended question (2.6 & 3.5) requiring the respondents to indicate the activities which they had found enjoyable while in the field revealed that generally students preferred those activities in which they were not actively involved, such as listening to talks presented in the field. In their responses relating to the activities least enjoyed the respondents indicated that they did

not enjoy doing field sketches, interviewing people and completing prepared worksheets. While this factor may appear to be alarming in the light of current educational theory, these results need to be considered in terms of the actual activities in which the students were engaged while undertaking fieldwork, and in relation to the type of fieldwork to which students have been exposed.

4.2.2.2 FIELDWORK EXPERIENCES WHILE AT COLLEGE

The second part of this question (3.1 - 3.9) was designed to reveal the extent of the respondents' involvement in geographical fieldwork in the course of their teacher training programme. The results revealed that only 16,8% of the student teachers in the survey population had undertaken any fieldwork in the course of their geography programme. Further enquiries revealed that only one of the four colleges involved in the survey included practical fieldwork in its geography courses. As a result of this factor questions concerning the frequency with which fieldwork is conducted, its duration and the types of activities which are developed can only be related to responses from this College. The results revealed the following:

- i) fieldwork is done once or twice a year;
- ii) field trips are designed to take half-a-day to a day;
- iii) the activities designed for these student teachers consisted primarily in observation and recording of data, listening to talks given in the field and field sketching. Activities less frequently done included interviews, rock and soil sampling, photographing, measuring, the completion of worksheets and doing traffic counts.

The situation is alarming as the respondents are the future teachers who are expected to implement this strategy when teaching. Perhaps the question which needs to be asked is, can the student teachers successfully conduct fieldwork in their teaching without any exposure to it?

The above information provides evidence that fieldwork is neglected both at Transkeian schools and Colleges of Education and does not employ the sorts of strategies identified in chapter 2. When and where it is done tends to be more directly related to conservative and traditional methods of teaching.

4.2.3 GROUP MANAGEMENT OF FIELDWORK IN SCHOOLS AND COLLEGES

The results of the questionnaire indicate that although teachers and lecturers do not generally use fieldwork in their classes, those who do conduct fieldwork are familiar with how to structure in terms of group work and data collected in the field (Table 4.6).

Table 4.6

STRUCTURING OF FIELD GROUPS BOTH AT SCHOOL AND COLLEGE

ITEM	CATEGORIES				
	ALONE	PARTNERS	SMALL GROUPS	BIG GROUPS	CLASS
2.8 School Experience	0.0	22.2	33.3	22.2	0.0
3.7 College Experience	0.0	0.0	20.0	0.0	80.0
GROUPING	CLASS	STANDARD	SCHOOL/COLLEGE		
2.9 School Experience	54.5	9.1	3.6		
3.8 College Experience	42.9	14.3	42.9		

Notwithstanding the fact that the group doing fieldwork at this College is small, follow-up interviews revealed that students are confronted with having no first-hand experience of group organisation and administration in the field, which could be problematic should these student teachers attempt fieldwork with large groups when teaching.

4.2.4 STUDENT TEACHERS' PERCEPTIONS RELATING TO ORGANISATION AND ADMINISTRATION OF FIELDWORK

This section of the questionnaire (6.1 - 6.7) attempted to establish the perceptions of College of Education students concerning the organisation and administration of fieldwork. The results revealed that student teachers support the notion that fieldwork excursions ought to be undertaken throughout the pupils' school career (78,7%). Student teachers furthermore supported the fact that field reports ought to be included in the pupils' examination results (81,1%). Notwithstanding this support there was little consensus relating to how fieldwork results ought to be presented. While only half of the respondents perceived the place of fieldwork to be in the normal course of the teaching programme, 60,3% indicated that fieldwork should be conducted as often as the subject matter lends itself to this teaching strategy.

The previous sections highlighted the fact that College of Education student teachers presently enrolled at teacher training colleges in Transkei are not well equipped with either an understanding of the dynamics related to field strategies or with the teaching skills needed to conduct fieldwork satisfactorily.

4.2.5 STUDENT TEACHERS' PERCEPTIONS OF THE VALUE OF FIELDWORK AS A TEACHING STRATEGY

This section of the questionnaire (4 - 5.6) explored student teachers' perceptions of the value of fieldwork. Table 4.7 shows the perceived benefits of fieldwork to the pupils.

Table 4.7

THE BENEFITS OF FIELDWORK TO PUPILS (Ranking according to the Mean)

RANK	MEAN	ITEM	BENEFITS OF FIELDWORK TO PUPILS
1	4.60	5.1f	develops pupils' awareness of their environment
2	4.46	5.1i	develops pupils' powers of observation
3	4.38	5.1h	develops pupils' ability to work with other people
4	4.28	5.1b	develops pupils' sense of responsibility
5	4.27	5.1k	develops pupils' skills in using statistical data
6	4.25	5.1e	develops pupils' interests and talents
7	4.24	5.1l	develops pupils' ability to understand geographical terms
8	4.23	5.1a	develops creativity in the pupil
9	4.20	5.1j	develops skills in using primary and secondary material
10	4.05	5.1n	develops pupils' ability to formulate and test hypothesis
11	3.93	5.1m	increases pupils' ability to solve problems
12	3.91	5.1g	develops pupils' interest in the community
13	3.90	5.1c	trains pupils to be self-sufficient
14	3.82	5.1d	develops a positive self-image in the pupil

The results reveal that the respondents generally accepted the value of fieldwork as a teaching strategy which could benefit the pupils in terms of both their cognitive and affective development. A closer analysis of the results however reveals a number of aspects which indicate that the student teachers do not necessarily understand the processes which are involved in using fieldwork. Thus, while student teachers ranked those aspects relating to the development of low order cognitive and affective skills highly, fieldwork was judged less positively in relation to the development

of high order skills associated with the identification of problems and problem-solving. The results further reveal that respondents are confused about fieldwork as a means to enhance the personal growth of the pupil, as they were unable to relate statements regarding the benefits of fieldwork in terms of developing the pupil's own interest and talents with statements relating to the development of a positive self-image.

An analysis of the subsets (Table 4.8) revealed that the only statistically significant difference in the responses was related to the fact that males rated fieldwork more highly as a means to develop pupils' awareness of their environment than females.

Table 4.8

THE BENEFITS OF FIELDWORK TO PUPILS : SUBSET ANALYSIS
(Expressed as percentage)

			%		SEX		SCHOOLING		AREA	
RANK	MEAN	ITEM	HIGH-EST	LOW-EST	MALE	FEMALE	RURAL	URBAN	RURAL	URBAN
1	4.60	51f	76.8*	3.6	54.5*	45.5	79.1	20.9	87.7	16.3
2	4.46	51i	71.9	1.8	54.8	45.2	80.5	19.5	80.5	19.5
3	4.38	51h	57.4	1.9	50.0	50.0	77.1	22.6	77.4	22.6
4	4.28	51b	57.1	3.6*	51.5	48.5	78.1	21.9	84.4	15.6
5	4.27	51k	56.4	3.6	56.2	43.7	74.2	25.8	77.4	22.6
6	4.25	51e	61.4*	3.5	44.4	55.6	77.1	22.9	80.0	20.0
7	4.24	51l	56.4	3.6	56.2	43.7	71.0	29.0	77.4	22.6
8	4.23	51a	56.1	5.3	43.7	56.2	75.0	25.0	81.3	18.7
9	4.20	51j	56.1	5.3	51.5	48.5	75.0	25.0	75.0	25.0
10	4.05	51n	48.2	5.4	50.0	50.0	74.1	25.9	77.8	22.2
11	3.93	51m	40.0	5.5	34.8	65.2	72.7	27.3	72.7	27.3
12	3.91	51g	38.9	5.6	40.9	59.1	76.2	23.8	71.4	28.6
13	3.90	51c	40.7	3.7	39.1	60.9	72.7	27.3	77.3	22.7
14	3.82	51d	44.6	8.9	50.0	50.0	76.0	24.0	80.0	20.0

Ranked according to the mean values.

While not statistically significant the results throughout the questionnaire revealed that students at rural Colleges of Education

supported fieldwork more strongly than their urban counterparts. The results furthermore revealed that students attending rural schools supported fieldwork more strongly than students who had attended urban schools. This is noteworthy in view of the fact that students in rural Colleges of Education frequently attended urban schools, with the converse applying to Urban Colleges. There is therefore an apparent anomaly between the results in terms of students' place of origin and present location at Colleges. This may be explained by the fact that the students' attitudes towards geography and therefore fieldwork are the result of their College studies rather than the schools they attended. This emphasises the need to develop College of Education courses which will provide future teachers with the sort of background they need both to understand and to implement the teaching strategies advocated by current geographical theory.

In the open-ended section of this question (5.2) which required the respondents to indicate other ways in which fieldwork can benefit the pupil, all the respondents indicated that information gathered in the field is retained longer. Illustrating this point further one respondent claimed that "On the spot study is the most remembered information by pupils". This was closely related to another response, i.e. "It is not easy to forget what was seen in a happy mood". Students also mentioned that fieldwork could develop good social relations among students themselves and between the students and the teacher.

The low responses to the open-ended questions as well as the type of suggestions given, further highlighted the problems students have in understanding the value of fieldwork for the pupil.

4.2.6 STUDENT TEACHERS' PERCEPTION OF THE VALUE OF FIELDWORK TO THE TEACHER

The following section considers the perceptions of students regarding the benefits of fieldwork to the teacher (Table 4.9).

Table 4.9

THE BENEFITS OF FIELDWORK TO THE TEACHER (Ranked according to the Mean)

RANK	MEAN	ITEM	BENEFITS OF FIELDWORK TO THE TEACHER
1	4.72	5.3h	links the theoretical aspects of the subject to the 'real world'
2	4.50	5.3f	to motivate the pupils towards a better attitude to the subject
3	4.15	5.3a	to assess pupils' understanding of the subject
4	4.12	5.3i	to deal more effectively with problematic areas in the syllabus
5	4.00	5.3b	to measure pupils' progress in the subject
6	3.95	5.3e	to establish a better rapport with the pupils
7	3.95	5.3k	to develop his/her interests in the subject with the pupils
8	3.92	5.3l	to prepare the pupil more effectively for examinations
9	3.86	5.3j	to deal more effectively with mixed ability groups
10	3.80	5.3c	to assess the pupils' aptitude for the subject
11	3.79	5.3m	to enhance the co-operation between different subjects
12	3.74	5.3d	to gain better insight into the pupils' personality
13	3.23	5.3g	to spend more time with the individuals pupils

An analysis of the mean values reveals that respondents are less sure about the benefits of fieldwork for the teacher. The most highly rated statement was that fieldwork links the theoretical aspects of the subject to the real world. This statement was, however, not associated with the fact that fieldwork can deal effectively with problematic areas of the syllabus. While the respondents regarded fieldwork as a means to develop an interest

in the subject, thereby leading to a better understanding of geography, the students were unable to perceive fieldwork as a means to prepare the pupils for examinations. A possible reason for this is that fieldwork is not directly related to the examination system, and that the students are therefore unable to see the link between fieldwork and geography examinations. Another reason could be the fact that students do not understand the processes associated with fieldwork.

Particularly noteworthy was the fact that the respondents do not perceive fieldwork as a means to develop a greater insight into pupils' personality or as an opportunity to spend more time with individual pupils. This factor has implications with regard to the way in which fieldwork is conducted. Where fieldwork is associated with observation and recording only, fewer opportunities are presented for teachers to get to know their pupils better.

As a result of the influence of traditional methods of teaching, the respondents were furthermore unable to see the possibilities fieldwork presents for integrating various subjects in the curriculum: compartmentalization of knowledge apparently continues to be fostered in the courses presented at Colleges of Education.

An analysis of the subsets (Table 4.10) reveals that female respondents regarded fieldwork as being generally more beneficial to teachers than did the male respondents.

Table 4.10

THE SUBSETS OF THE RESPONDENTS

			%		SEX		SCHOOLING		AREA	
RANK	MEAN	ITEM	HIGH-EST	LOW-EST	MALE	FEMALE	RURAL	URBAN	RURAL	URBAN
1	4.72	53h	84.2	3.5	51.0	49.0	70.4	29.6	70.6	29.4
2	4.50	53f	62.5	3.6	44.4	55.6	70.6	29.4	80.0	20.0
3	4.15	53a	46.4	1.8	44.4	55.6	73.1	26.9	73.1	26.9
4	4.12	53i	50.9	1.9	53.6	46.4	75.0	25.0	77.8	22.2
5	4.00	53b	62.5	3.6	52.0	48.0	66.7	33.3	75.0	25.0
6	3.95	53e	43.6	3.6	40.0	60.0	77.1	22.9*	73.7	26.3
7	3.95	53h	40.7	7.4	47.6	52.2	75.0	25.0	63.6*	36.4
8	3.92	53l	35.1	7.0	48.3	51.7	72.7	27.3	78.6	21.4
9	3.86	53j	37.5	5.4	47.6	52.4	63.6	36.4	70.0	30.0
10	3.80	53c	46.4	1.8	54.5	55.5	70.0	30.0	66.7*	33.3
11	3.79	53m	30.4	8.9	52.2	47.8	73.9	26.1	68.2	31.8
12	3.74	53d	50.9	1.9	38.1	61.9	63.2	36.8	75.0	25.0
13	3.23	53g	39.3	7.1	44.4	55.6	81.3	18.7	70.6	29.4

Ranked according to the mean

Statistically significant differences in the responses occurred in the following areas:

- i) The female respondents regarded the way in which fieldwork caters for individual differences more highly than did the male respondents.
- ii) The rural students regarded fieldwork as a means to offer opportunities to establish a better rapport with pupils more highly than did the urban students.
- iii) The rural students perceived fieldwork as a means to provide opportunities for the teacher to get to know the pupils better more strongly than did their urban counterparts.
- iv) Rural students regarded fieldwork less highly as a means to provide opportunities for both the teacher and the pupil to develop their interests in geography.

- v) Rural students regarded fieldwork less highly as a means to provide opportunities for teachers to assess the pupils' aptitude for geography.

A further examination of how males and females responded to this section of the questionnaire revealed the following trends. The female respondents tended to support the notion of fieldwork as a means to motivate pupils more highly than their male counterparts. Once again the trend was for rural students to support this aspect of fieldwork more strongly than urban students.

The open-ended section of this question (5.4) was completed by 68,9% of the respondents. The results revealed that the students' responses to this question were similar to the closed questions in that respondents further highlighted the fact that fieldwork benefits the teaching of geography as it develops positive attitudes towards the subject. The respondents further indicated that fieldwork helps students value geography as it helps them to understand the theoretical aspects of the syllabus, thus increasing the popularity of the subject. This can be related to the claim made by one respondent that fieldwork broadens the minds of the pupils as it transforms words into experiences. This means that fieldwork has a perceived ability to link theory with reality. Finally fieldwork was regarded as a means to improve the relations between teachers and students, with the result that teachers and students would tend to understand each other better. The results, however, also highlighted the following anomalies. While the respondents claimed that fieldwork cultivates pupils' interest in geography they did not perceive fieldwork as a means to develop positive attitudes in pupils towards the subject.

4.2.7 STUDENT TEACHERS' PERCEPTIONS OF FIELDWORK AS A MEANS TO ENHANCE THE STUDY OF GEOGRAPHY

Table 4.11 reveals that the respondents perceived the role of fieldwork as a means to enhance the study of geography more positively than in the previous sections.

Table 4.11
HOW FIELDWORK ENHANCES GEOGRAPHY

RANK	MEAN	ITEM	HOW FIELDWORK ENHANCES GEOGRAPHY
1	4.39	5.5e	develops better learning techniques within the subject
2	4.39	5.5f	improves the teaching of the subject
3	4.38	5.5b	develops a wider interest in the subject
4	4.15	5.5d	improves pupils' attitude to the subject
5	4.09	5.5c	creates a greater awareness of central issues within the subject
6	3.85	5.5a	increases the 'popularity' of the subject
7	3.72	5.5h	gives the community an opportunity to develop an awareness of the subject
8	3.63	5.5g	enhances the status of the subject

Ranked according to the mean

The statement receiving the strongest support was that fieldwork leads to the development of better learning techniques within geography and as a result the teaching of geography is improved. Respondents, however, failed to perceive how fieldwork is able to increase the popularity of geography thus enhancing its status, although they had given relatively strong support to the statement which indicated that fieldwork increases the interest of pupils in the subject.

Further analysis of the results (Table 4.12) reveals that while there were no statistically significant differences female

respondents tended to regard fieldwork as developing awareness of geography in the community more highly than male respondents. On the other hand male respondents regarded fieldwork as creating greater awareness of central issues within geography and as enhancing the status of geography more highly than females.

Table 4.12

HOW FIELDWORK ENHANCES GEOGRAPHY : SUBSET ANALYSIS

			%		SEX		SCHOOLING		RESIDENCE	
RANK	MEAN	ITEM	HIGH-EST	LOW-EST	MALE	FEMALE	RURAL	URBAN	RURAL	URBAN
1	4.39	5.5e	64.4	6.8	45.7	54.3	70.6	29.4	79.4	20.6
1	4.39	5.5f	35.6	10.2	46.9	53.1	74.2	25.8	74.2	25.8
3	4.38	5.5b	58.3	3.3	40.6	59.4	74.2	25.8	77.4	22.6
4	4.15	5.5d	42.4	1.7	45.5	54.5	66.7	33.3	71.4	28.6
5	4.09	5.5c	44.8	1.7	52.2	47.8	77.3	22.7	72.7	27.3
6	3.85	5.5a	44.1	8.5	50.0	50.0	73.9	26.1	73.9	26.1
7	3.72	5.5h			37.5	62.5	65.2	34.8	72.2	27.8
8	3.63	5.5g	43.1	8.6	52.6	47.4	66.7	33.3	69.6	30.4

The open-ended section of this question (5.6) was completed by 60.7% of the respondents. The results revealed that student teachers generally regarded fieldwork as able to enhance the study of geography. The respondents claimed that fieldwork fosters pupils' interest in geography and also helps pupils understand geography as a 'real' subject. The results further revealed that fieldwork provides opportunities for the clarification of geographical terms.

4.2.8 STUDENT TEACHERS' PERCEPTIONS OF THE POTENTIAL WHICH THE VARIOUS SECTIONS OF THE SYLLABUS HAVE FOR FIELDWORK

Student teachers' perceptions of the syllabus potential regarding fieldwork (Table 4.13) reveals that geomorphology, urban settlement geography and natural regions are considered to have the greatest potential for fieldwork. Rural settlement geography, map reading and interpretation, developed and developing countries and climatology were less strongly supported. The areas that received the least support were economic geography, South Africa and population geography. The section, Geography of regions outside Africa, was not regarded as having any potential for fieldwork.

Table 4.13

RANKING OF THE VARIOUS SECTIONS OF THE SYLLABUS

RANK	MEAN	ITEM	VARIOUS SECTIONS OF THE SYLLABUS
1	4.63	7.1c	geomorphology
2	4.37	7.1g	urban settlement geography
3	4.31	7.1d	natural regions
4	4.22	7.1h	rural settlement geography
5	4.16	7.1a	map reading and interpretation
6	4.14	7.1f	developing and developed countries
7	4.05	7.1b	climatology and weather studies
8	3.81	7.1e	economic geography
9	3.81	7.1k	regional geography of Africa
10	3.76	7.1j	South Africa
11	3.75	7.1i	Population geography
12	2.90	7.1l	Geography of regions outside Africa

Ranked according to the mean

An analysis of the subsets (Table 4.14) reveals that there was a difference, though not statistically significant, between the responses of males and females with regard to the rating of the various sections of the syllabus. Male respondents supported rural settlement geography, climatology and weather studies, economic geography and population geography more strongly in terms of their fieldwork potential than female respondents. On the other hand

female respondents supported the fieldwork potential of the regional geography of Africa and South Africa more strongly than male respondents.

Table 4.14

THE VARIOUS SECTIONS OF THE SYLLABUS : SUBSET ANALYSIS

			%		SEX		SCHOOLING		AREA	
RANK	MEAN	ITEM	HIGH-EST	LOW-EST	MALE	FEMALE	RURAL	URBAN	RURAL	URBAN
1	4.63	7.1c	74.5	3.6	50.0	50.0	80.0	19.5	80.5	19.5
2	4.37	7.1g	60.4	4.2	50.0	50.0	82.8	17.2	75.9	24.1
3	4.31	7.1d	59.3	3.7	51.5	48.5	78.1	21.9	78.1	21.9
4	4.22	7.1h	52.0	2.0	55.6	44.4	76.9	23.1	73.1	26.9
5	4.16	7.1a	61.1	7.4	50.0	50.0	75.8	24.2	75.8	24.2
6	4.14	7.1f	55.8	5.8	50.0	50.0	75.9	24.1	79.3	20.7
7	4.05	7.1b	52.8	5.7	58.6	41.4	71.4	28.6	75.0	25.0
8	3.81	7.1e	44.4	7.4	56.0	44.0	79.2	20.9	79.2	20.8
9	3.81	7.1k	38.2	9.1	45.5	54.5	71.4	28.6	71.4	28.6
10	3.76	7.1j	38.2	7.3	45.5	54.5	81.0	19.0	71.4	28.6
11	3.75	7.1i	41.5	7.5	56.5	43.5	72.7	27.3	72.7	27.3
12	2.90	7.1l	28.3	6.5	46.2	53.8	69.2	30.9	61.5*	38.5

4.2.9 PROBLEMS PERCEIVED BY STUDENT TEACHERS IN THE IMPLEMENTATION OF FIELDWORK

The analysis of students' perceptions relating to the problems of implementing fieldwork was based on a 1-5 scale with 5 indicating that the statement was not perceived as a problem and with 1 indicating a major problem. Table 4.15 therefore shows the ranking in relation to the problems as they have been identified rather than in relation to aspects which were not considered problematic.

Table 4.15

RANKING OF PROBLEMS ENCOUNTERED WHEN CONDUCTING FIELDWORK

RANK	MEAN	ITEM	PROBLEMS IN CONDUCTING FIELDWORK
1	2.00	7.2a	the limited time at the pupils' disposal
2	2.33	7.2d	the limited time at the teachers' disposal
3	2.34	7.2c	pupils' lack of prior training in skills needed for fieldwork
4	2.46	7.2k	the cost factor
5	2.57	7.2h	the lack of teachers' expertise in conducting fieldwork
6	2.81	7.2b	the pupils lack of motivation
7	3.00	7.2g	the lack of suitable sites nearby
8	3.20	7.2e	the length of the syllabus to be covered
9	3.28	7.2j	the diverse abilities of the pupils
10	3.30	7.2i	the size of the class
11	3.61	7.2f	the constraints of the examination system

The results on Table 4.15 reveal that the respondents perceived the following to be the major problems associated with conducting fieldwork:

- i) that both the pupils and teachers have limited time at their disposal;
- ii) pupils' lack of prior training in skills should be rectified by use of selected class exercises;
- iii) the problem of finance;
- iv) the lack of teachers' expertise;
- v) the pupils' lack of motivation.

It was noteworthy that the respondents did not perceive the size of the class, the examination constraints, and the length of the syllabus, as particularly problematic. This may be attributed to the fact that the student teachers lack fieldwork experience.

The analysis of the subsets (Table 4.16) revealed the following trends:

- i) males perceived items 1-5 as more problematic than did females while the females perceived items 6-11 as more problematic than the males;
- ii) rural students identified more areas as being problematic to the implementation of fieldwork than did their urban counterparts.

A comparison of the male and female responses concerning the perception of problems relating to the implementation of fieldwork reveals that the males are more sensitive to constraints relating to time and cost factors, while female students are generally more concerned about pupils' abilities, class size and the constraints of the examination system.

The response of the rural students is particularly noteworthy in view of the fact that while they generally supported fieldwork more strongly than urban students, they also perceived the implementation of fieldwork as being more problematic than their urban counterparts.

Table 4.16

PROBLEMS IN CONDUCTING FIELDWORK : SUBSET ANALYSIS

			%		SEX		SCHOOLING		AREA	
RANK	MEAN	ITEM	HIGH-EST	LOW-EST	MALE	FEMALE	RURAL	URBAN	RURAL	URBAN
1	2.00	7.2a	52.8	3.8	66.7	33.3	80.0	20.0	80.0	20.0
2	2.33	7.2d	37.0	9.3	66.7	33.3	80.0	20.0	80.0	20.0
3	2.34	7.2c	45.3	9.4	80.0	20.0	60.0	40.0	60.0	40.0
4	2.46	7.2k	-	-	70.0	30.0	80.0	20.0	90.0	10.0
5	2.57	7.2h	42.6	4.3	70.0	30.0	77.8	22.2	77.8	22.2
6	2.81	7.2b	34.0	11.3	33.3	66.7	66.7	33.3	66.7	33.3
7	3.00	7.2g	30.2	7.5	46.7	53.3	86.7	13.3	86.7	13.3
8	3.20	7.2e	40.0	5.5	35.0	65.0	84.2	15.8	84.2	15.8
9	3.28	7.2j	48.1	5.8	27.3	72.7*	72.7	27.3	81.8	18.2
10	3.30	7.2i	39.6	11.3	38.5	61.5	75.0	25.0	75.0	25.0
11	3.61	7.2f	35.2	7.4	41.2	58.8	87.5	12.5	87.5	12.5

The open-ended section of the question (7.2) was completed by 42,2% of the respondents. The results of the open-ended section to this part of the questionnaire (Section E) revealed the following. The respondents emphasised financial constraints as being the most problematic factor inhibiting the implementation of fieldwork in schools. Lack of teacher expertise regarding fieldwork was identified as a further problem. One respondent claimed that teachers do not conduct fieldwork because they are not interested in the subject. The student teachers claimed that sometimes teachers take pupils to areas which are not relevant to the syllabus. The student teachers indicated that pupils also lack motivation as they do not regard fieldwork as an educational exercise. Finally, lack of suitable sites and time constraints were cited as factors which hinder the conducting of fieldwork.

4.3 SUMMARY

An important factor which this study revealed is the relatively small number of third year student teachers at Colleges of Education who specialise in geography (11,7%). This factor could be problematic in terms of the future growth of geography in Transkei.

The results of the questionnaire highlighted the following factors in respect of students' perceptions.

- i) That student teachers generally accepted fieldwork as an indispensable teaching strategy in geographical education as it increases conceptual and perceptual understanding.
- ii) Fieldwork can be used to cover the syllabus as most theories and principles can be learnt and tested in the field.

The results, however, revealed that students who had experienced fieldwork had a limited exposure to the sort of activities generally associated with modern approaches to fieldwork, and as a result of this they were unable to understand the dynamics of fieldwork. The results further highlighted the logistic and educational constraints which affect the implementation of fieldwork in Transkei schools.

CHAPTER 5

5. PHASE II : ANALYSIS OF THE INTERVIEWS

5.1 INTRODUCTION

The analysis of the questionnaire revealed the need for further clarification with regard to the following aspects:

- i) Further investigation relating to the possible reasons for the lack of fieldwork in both Transkeian schools and Colleges of Education, in the hope that this would further illuminate the nature of constraints to the implementation of fieldwork.
- ii) The type of activities which the student teachers experienced in the field, how they perceived these and what type of activities they perceived to be worthwhile.
- iii) How student teachers perceived fieldwork assessment and the examination of fieldwork.
- iv) The student teachers' perceptions of the role of fieldwork in the existing syllabus, and of how it could be implemented while working within the constraints of the existing syllabus and the existing problems in schools.
- v) The student teachers' ability to conduct fieldwork in their teaching programme in view of the apparent lack of guidance in this teaching strategy.

These aspects provided the focus for the interviews.

5.2 THE INTERVIEW SAMPLE

The interview sample was composed of fourteen student teachers from the participating Colleges of Education. Of the fourteen student teachers eight were males and six were females. The interviewees attended College 01 (urban), 03 (rural) and 04 (urban). College

04 could not participate because of unrest-related problems. Group interviews were preferred to individual interviews because the response tends to be higher in groups than with individuals (Sanders and Pinhey, 1983). A total of five groups was interviewed. Four of the groups consisted of three interviewees. The fifth group consisted of two third year student teachers.

5.3 ANALYSIS OF THE INTERVIEWS

5.3.1 STUDENT TEACHERS' PERCEPTIONS OF THE PROBLEMS ENCOUNTERED WHEN CONDUCTING FIELDWORK

The initial questions were designed to gain greater insight into the reasons for not conducting fieldwork in both Transkeian schools and Colleges of Education. The student teachers when responding to this question indicated that finance was perceived as the major problem. This emphasis on finance as the major deterrent to the development of fieldwork in Transkeian schools was reflected in the questionnaire results. The emphasis on lack of funds further highlighted not only the financial constraints under which geography teachers operate but also revealed the general lack of understanding of the role and value of the local environment in the development of fieldwork. This leads to fieldwork being perceived primarily as visits to distant places.

The student teachers perceived teachers' attitudes towards fieldwork as another factor militating against the incorporation of fieldwork in the geography courses. The students enlarged upon this aspect by emphasising the fact that teachers saw fieldwork as a waste of time and tended to avoid it as this strategy is perceived to require a great deal of preparation. During the ensuing discussion it emerged that teachers' attitudes to fieldwork

are influenced by the fact that they do not generally understand the role of fieldwork in geographical education, nor therefore do they perceive fieldwork as a means to develop geographical skills. Furthermore, because fieldwork is not directly examined in the Senior Certificate examinations teachers do not understand the role of fieldwork in developing spatial perception and concepts which are essential to the understanding of geography. This factor manifests itself with regard to the field sites chosen by teachers and the frequency with which fieldwork is carried out.

The questionnaire results revealed that student teachers perceive fieldwork to be an important aspect of geographical education. These initial responses however when analysed indicated that student teachers are confused about many aspects of the value of fieldwork, as was evinced by the many inconsistencies and anomalies in these responses. The interviews revealed that students, while unanimously accepting fieldwork as being worthwhile in terms of its general benefits to pupils, had little real understanding of precisely how fieldwork would be of value. Thus student teachers emphasised the value of fieldwork as a means to develop cognitive and affective skills but were unable to identify these skills or to explain how fieldwork should be organised in order to develop these skills. It was also apparent from the interviews that student teachers have a generally poor understanding of geographical skills in relation to cognitive and affective skill development. Further discussion revealed that student teachers considered fieldwork valuable primarily as a means to apply theory, "as it brings reality to pupils".

5.3.2 ANALYSIS OF ACTIVITIES PERFORMED BY STUDENT TEACHERS WHILE IN THE FIELD AND THE TYPE OF ACTIVITIES REGARDED AS WORTHWHILE

The questionnaire attempted to find out what type of activities the student teachers regarded as essential for fieldwork. The results presented a somewhat problematic picture in terms of student teachers' perceptions of the way in which fieldwork should be organised. This part of the interview therefore attempted to gain clarity about student teachers' perceptions of the type of activities that ought to be included in fieldwork. The questionnaire responses revealed that the student teachers had not particularly enjoyed the activities which are recognised as essential tools for gathering data in the field. The somewhat negative responses revealed in this section of the questionnaire were considered by the researcher as symptomatic of the fact that few if any of the students had prior knowledge of fieldwork strategies. The interviews revealed that fieldwork excursions are regarded as a time for pleasure and not for study. The student teachers further claimed that they disliked activities related to data collection as they do not appreciate being given work outside the school situation.

When asked to explain why they disliked the activities mentioned they claimed that completing worksheets is too time-consuming. With regard to field sketches the respondents indicated that they had a poor foundation in drawing and therefore found it difficult to do field sketches. In the case of interviews, the respondents revealed their own lack of self-confidence as interviewees and fear of interviewees' reaction. The lack of self-confidence in African students can be partially explained in terms of their culture.

Xhosa culture does not encourage young people either to question or to argue with an older person. Therefore the students indicated that they felt inhibited as interviewers.

Further probing regarding the sorts of field activities that student teachers enjoyed revealed that listening to talks presented by the teacher in the field was seen as preferable to instruction in the classroom. Discussion revealed that the difference lay in the fact that in the classroom the teacher is mainly theorising whereas in the field the pupils are able to observe what is being taught. The student teachers interviewed further indicated that they enjoyed observing and describing what they saw. These responses further highlighted the lack of development of high order skills in the use of fieldwork.

During the ensuing discussion the respondents expressed the belief that fieldwork should be done throughout the pupils' school career. The student teachers saw this as important as implementing fieldwork in this manner would allow for the development of skill progression, i.e. from simple observation at the primary level to identification of problems and problem solving at secondary and tertiary level. The students interviewed could, however, not conceptualise how this progression could be developed in practical terms.

5.3.3 STUDENT TEACHERS' PERCEPTIONS OF FIELDWORK ASSESSMENT AND EVALUATION OF FIELDWORK

The results of the questionnaire revealed that student teachers agreed that fieldwork ought to be evaluated though there was no general consensus on how fieldwork ought to be followed up. The

student teachers interviewed indicated a preference for fieldwork follow-up to be presented as a written report. The respondents further indicated that an oral report would not give opportunities to every individual as discussions tend to be dominated by the "talkative" students. Another fear was that an oral report would be unsuitable for large classes. In further supporting the notion of a written report the respondents indicated that pupils need to be given every opportunity to develop their writing skills in preparation for their examinations. Finally, the respondents claimed that in a written report the teachers would be given an opportunity to get to know their pupils better.

The next problem considered was the examination of fieldwork. Analysis of the questionnaire revealed that the respondents had indicated a need for fieldwork to be examined at the end of the year. The students when interviewed supported this. The reason given was that fieldwork is part of the syllabus, and ought to be examined. During the ensuing discussion the student teachers strongly supported the notion that if fieldwork were to be examined, teachers would be forced to do it and pupils would also perceive its value and take it seriously. Concerning the manner of examination at Colleges of Education, respondents indicated that during the final year fieldwork ought to be assessed internally by the lecturer concerned and be moderated externally by a member of the Department of Collegiate Education for inclusion in the examination mark. These findings illuminate the fact that teachers in most cases teach for examinations and that pupils do not learn because they want to know but mainly because they want to pass the examinations. The student teachers interviewed indicated that

examinations remained a major motivating factor even at tertiary level.

5.3.4 STUDENT TEACHERS' PERCEPTIONS REGARDING THE ROLE OF FIELDWORK IN THE EXISTING SYLLABUS

The researcher furthermore attempted to obtain greater clarity regarding the students' perceptions of the syllabus potential for fieldwork. The interview revealed that students perceived geomorphology as having the greatest potential for fieldwork. The reasons given were that landscape features are readily observable and that the observation process involves all the senses. Other areas identified by the student teachers as having fieldwork potential were closely related to their responses in the questionnaire.

5.3.5 STUDENT TEACHERS' PERCEIVED ABILITY TO CONDUCT FIELDWORK IN THEIR TEACHING PROGRAMME

The interviewees were finally asked whether they considered themselves to be capable of conducting fieldwork in their teaching. Only three of the fourteen student teachers indicated that they would be unable to conduct fieldwork, having never been exposed to it. The other eleven student teachers indicated that they were willing to conduct fieldwork, as they perceived this strategy to be an important aspect of geography teaching. While it is encouraging to note that student teachers displayed this sort of willingness to conduct fieldwork in their teaching, it further emphasised the need for greater guidance to ensure that fieldwork be conducted effectively.

5.4 SUMMARY

The interview results highlighted the following factors: that the student teachers are aware of fieldwork as an important teaching strategy in geographical education, and that they regard the opportunities offered by the local environment as valuable for the development of fieldwork. The interviews further revealed that student teachers acknowledge the value of fieldwork for the development of various skills. While students indicated their willingness to implement this strategy in teaching, the interviews also made it clear that:

- i) Students have a poor grasp of the theoretical underpinnings of fieldwork approaches.
- ii) They have a vague conception both of the skills associated with fieldwork and of the activities which can be designed to develop those skills.
- iii) The students themselves lack the essential skills needed for the implementation of fieldwork.

•

More importantly the interviews served to reinforce the results of the questionnaire pertaining to problems with existing teaching strategies in Transkei. Where pupils are not trained in the normal course of the teaching programme to take responsibility for their own learning, they will not be able to take responsibility for the type of learning which fieldwork emphasises. This would seem to highlight not only the need to develop fieldwork strategies during the course of the teacher training programme, but also the need for great emphasis on participatory strategies in general.

CHAPTER 6

SUMMARY, CONCLUSION AND RECOMMENDATION

6.1 SUMMARY

Fieldwork is important in geographical education as it provides experiential learning which ensures greater understanding by pupils, thus improving the attitude of pupils towards geography. Fieldwork has been identified as developing concepts and skills. Research has however shown that fieldwork is neglected in South African schools (Nicol, 1976; Ballantyne, 1986).

An analysis of current South African school geography syllabuses reveals a close alignment with the most recent geographical paradigms. Fieldwork ought therefore to play an important part in the South African school syllabus. Fieldwork became an explicit part of South African geographical education with the introduction of the 1973 syllabus. Transkei schools, in adopting the Cape Education Department geography syllabus, have maintained links with international geographical theory and its emphasis on the development of skills, attitudes, values and concepts.

If fieldwork is to occupy the central position which it ought to in geographical education, a primary prerequisite is for teachers to have expertise in a wide range of field experiences and skills. This study was therefore concerned with examining the role of fieldwork in the teacher training courses in Transkei, and with assessing student teachers' perceptions of the role and value of fieldwork in the teaching of geography. The survey was conducted with third year geography specialists at Transkei Colleges of Education, and sought to relate their experiences of fieldwork to

recent theories concerning fieldwork approaches.

The survey revealed that either student teachers lack practical fieldwork experience completely or their fieldwork experience has been limited to teacher-directed approaches which are primarily associated with teaching in the field. As a result of a lack of both fieldwork experience and the purely theoretical background to fieldwork, student teachers revealed confused perceptions of the processes and the dynamics of fieldwork. Thus while student teachers accepted the value of fieldwork as a teaching strategy for the development of cognitive and affective skills, they were unsure of what these skills are and how to develop them. Students were also unable to perceive how fieldwork could be of benefit to the teacher. While the respondents emphasised the need for fieldwork to form part of the existing examination and assessment system, they were unsure of how fieldwork could be structured in order to provide a meaningful assessment.

A further factor which was highlighted by the survey was that though student teachers were able to conceptualise the syllabus in terms of its potential for fieldwork, this conceptualisation was neither broad enough nor was it related to a knowledge of how to apply fieldwork to various sections of the syllabus identified as having fieldwork potential.

The factors which the students identified as inhibiting the implementation of fieldwork included the following:

- * financial constraints
- * lack of teacher expertise
- * demands of the examination

- * the syllabus constraints
- * problems related to time
- * the rigidity of the school time-table.

The survey highlighted the following problems relating to fieldwork in Transkei Secondary Education:

- i) The poor understanding which exists within the school hierarchy and the Inspectorate of the role and value of this teaching strategy in education.
- ii) Teachers' perceptions of fieldwork as a waste of valuable time, as an indication of the general lack of understanding about the role and value of fieldwork.
- iii) The fact that teachers generally do not recognise the value of the local environment for fieldwork (fewer than 5% of the respondents had been involved in local studies).

The results of the survey furthermore revealed that:

- iv) Student teachers are instructed in fieldwork which is based primarily on observation, recording and field teaching, and therefore are not exposed to the sorts of strategies advocated by current geographical theories.
- v) Student teachers presently enrolled at Transkei Colleges of Education are poorly equipped in respect of both an understanding of the dynamics related to field strategies and the teaching skills needed to conduct fieldwork satisfactorily.
- vi) Student teachers do not regard fieldwork as an educational exercise as they are unable to accept the need for activities which demand rigour. The student teachers interviewed emphasised the fact that they resented having to apply themselves in the field. This highlights the

problem which has resulted from traditional 'teacher tell' and consequent pupil passivity.

- vii) Student teachers do not see fieldwork as preparing pupils for examinations. This is so because fieldwork is not directly related to the current examination system.
- viii) Student teachers are unable to see the possibilities presented by fieldwork for integrating the various subjects within the curriculum.
- ix) Student teachers have a poor grasp of the theoretical underpinnings of fieldwork approaches and as a result are unable to conceptualise skills associated with fieldwork or the activities which can be designed to develop these skills.
- x) Student teachers lack essential skills needed for the implementation of fieldwork.

The survey therefore emphasises the following:

- i) Where teachers and pupils are unfamiliar with participatory strategies fieldwork becomes problematic and is therefore viewed as being of little educational value.
- ii) The lack of understanding about fieldwork and its role in geographical education has meant that fieldwork is neglected both in the schools and Colleges of Education.

The present situation in Transkei is such that teachers emerging from the Colleges of Education as geography specialists, in spite of their willingness to use this strategy, are not equipped to implement it meaningfully. Unless the student teachers are fully trained in field approaches and are exposed to these themselves,

it is unlikely that they will be able to implement the fieldwork strategy in the teaching of geography.

6.2 GENERAL RECOMMENDATIONS

Teachers need to be aware of the value of fieldwork as a teaching strategy. This awareness can be fostered through:

- i) The formation of geography associations so that specialist geography teachers might share their expertise with their disadvantaged colleagues.
- ii) In-depth training in fieldwork so that teachers' attitudes are changed and their confidence increased. This can be done by involving the Department of Geography at the University of Transkei in developing material for teachers to use in the field, and in a variety of other practical ways.
- iii) In-service training centres which could organise courses for teachers where training in field activities is given in situ.
- iv) The incorporation of more fieldwork units in geography textbooks at all levels to give teachers firmer guidelines in the teaching of fieldwork.
- v) Studies which show the value of using the school environment and the immediate local environment where the financial resources for more ambitious projects are lacking.
- vi) The sequential development of fieldwork from primary to tertiary level. This will ensure that pupils perceive the value of fieldwork.
- vii) The universal implementation of fieldwork. If fieldwork is compulsory and uniformly implemented in terms of a framework of skills progression, problems associated with dis-

crepancies within the school structure will be reduced.

- viii) The inclusion of fieldwork in external examinations so that teachers do not neglect it.

The limitations of this study (Chapter 3) emphasise the need for further research in the following areas:

- i) Action studies which investigate the implementation of fieldwork in Transkei schools.
- ii) The development of strategies and methodology for fieldwork which is accessible to and readily understandable by teachers and pupils.
- iii) The development of fieldwork units which while linked to the existing syllabuses are relevant and applicable in Transkei schools.
- iv) Factors which influence and affect changes in teaching approaches, with a view to implementing greater participatory strategies in Transkeian schools.

6.3 RECOMMENDATIONS FOR TRANSKEIAN COLLEGES OF EDUCATION

When viewing the current syllabus for geography in Transkei Colleges of Education it is noted that:

- i) There is very little emphasis on participatory teaching strategies.
- ii) There is very little theory relating to fieldwork, which therefore reduces its perceived value and affects the practical implementation of field techniques.
- iii) The syllabus content has, however, considerable potential for the implementation of fieldwork.

In view of the survey results and in the light of current practices

in Transkei Colleges of Education the following suggestions are made:

1. The syllabus needs to be restructured along the following lines:
 - a. Special provision for fieldwork should be made in the content and method syllabuses.
 - b. The inclusion of a methodology course in Course I (Appendix Ei).
 - c. The inclusion of fieldwork, both theory and practice, in the method syllabus from Course I to Course III (Appendix Ei - Eiii).
 - d. Emphasis must be on the practical implementation of recent fieldwork approaches.
 - e. Guidelines on activities which can be performed during a fieldwork excursion must be given in the syllabus.
 - f. Fieldwork units must be designed by the syllabus planners for each topic suitable for fieldwork, to help lecturers and student teachers to conduct fieldwork.

2. An association for Geography College lecturers must be formed to ensure the following:
 - a. That student teachers are taught both the theory and the practice of participatory teaching strategies.
 - b. That school trails for Transkeian Colleges and schools are developed by both geography lecturers and student teachers at Colleges of Education.
 - c. That fieldwork units which are readily understandable and accessible, and relevant to users' home environments, are developed by geography lecturers.

- d. That lecturers and student teachers work together to design fieldwork units.
- e. That in Course II and Course III student teachers are encouraged to design their own field units, in the form of Projects, as practice for the future.
- f. That examples of fieldwork activities which can be carried out in the school environment are compiled by the association to encourage the use of the local environment.
- g. The selection of texts which have field units to guide lecturers and student teachers.
- h. That consideration is given to the setting of questions in the final examinations on knowledge acquired as a result of fieldwork.

6.4 CONCLUSION

Many factors contribute to pupils' lack of skills and conceptualisation in geography. Amongst these are teachers' reliance on teacher-directed methods which generate boredom, and the lack of essential teaching and learning resources at schools. These problems are further exacerbated by the fact that geography is taught in English, which is the pupils' second language. Nevertheless, the implementation of learner-centred approaches, particularly fieldwork, which involve pupils in the learning process through their own efforts and experience, would serve to reinforce concepts obtained in the classroom and to emphasise the reality of geography. Pupils need to be exposed to fieldwork on a regular basis. It is therefore imperative to train teachers who are able to implement this strategy.

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GEOGRAPHY FIELDWORK AT COLLEGES OF EDUCATION.

A questionnaire for third year student teachers specialising in Geography.

For office use only
 Case No.
 College
 4

PLEASE ANSWER THE FOLLOWING QUESTIONS.

A. GENERAL.

1.1 Please indicate your present age in years.

5-6

1.2 Please indicate your sex

a) male

b) female

(Please tick the appropriate block)

1
 2

7

1.3 Please indicate whether you grew up in an

a) rural area

b) urban area

(Please tick the appropriate block)

1
 2

8

1.4 Please indicate whether the school you attended was in:

a) a rural area

b) an urban area

(Please tick the appropriate block)

1
 2

9

1.5 Please indicate whether the school you attended was a,

a) private school

b) missionary school

c) state/government school

(Please tick the appropriate block)

1
 2
 3

10

1.6 Please indicate whether you have been employed in any other job before attending College

a) yes

b) no

(Please tick the appropriate block)

1
 2

11

1.7 Would you please indicate what your previous occupation was

..... *Student*

12-13

B. FIELDWORK EXPERIENCE.

3. SCHOOL FIELDWORK EXPERIENCE

2.1 Did you attend any fieldwork during your school years?

- a) yes
- b) no

(Please tick the appropriate block)

1	<input checked="" type="checkbox"/>
2	<input type="checkbox"/>

1

14

2.2 If the answer to the above question is yes was it at,

- a) primary level
- b) secondary level
- c) senior secondary level

(Please tick the appropriate block)

yes	1	<input type="checkbox"/>
no	2	<input type="checkbox"/>
yes	1	<input type="checkbox"/>
no	2	<input type="checkbox"/>
yes	1	<input checked="" type="checkbox"/>
no	2	<input type="checkbox"/>

2

15

2

16

1

17

2.3 If you have done fieldwork at school did it include any of the following: (Please tick the appropriate block/s.)

- a) a visit to the local museum
- b) a visit to a nature reserve
- c) a visit to the beach
- d) a visit to a forest
- e) a visit to a river area
- f) a visit to a distant town

(any others please specify)

.....

.....

.....

.....

yes	1	<input type="checkbox"/>
no	2	<input type="checkbox"/>
yes	1	<input type="checkbox"/>
no	2	<input type="checkbox"/>
yes	1	<input type="checkbox"/>
no	2	<input type="checkbox"/>
yes	1	<input type="checkbox"/>
no	2	<input type="checkbox"/>
yes	1	<input checked="" type="checkbox"/>
no	2	<input type="checkbox"/>
yes	1	<input type="checkbox"/>
no	2	<input type="checkbox"/>

2

18

2

19

2

20

2

21

1

22

2

23

2

24

2.4 If you have done fieldwork at school did it involve: (Please tick the appropriate block/s.)

- a) a slope study
- b) a soil study
- c) a rock study
- d) a farm study

yes	1	<input checked="" type="checkbox"/>
no	2	<input type="checkbox"/>
yes	1	<input checked="" type="checkbox"/>
no	2	<input type="checkbox"/>
yes	1	<input type="checkbox"/>
no	2	<input type="checkbox"/>
yes	1	<input type="checkbox"/>
no	2	<input type="checkbox"/>

1

25

1

26

2

27

2

28

- | | | | | | |
|---------------------------------------|-----|---|--------------------------|---|--------------------------|
| e) a school trail | yes | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> |
| | no | 2 | <input type="checkbox"/> | | 29 |
| f) residential study of your own area | yes | 1 | <input type="checkbox"/> | | 2 |
| | no | 2 | <input type="checkbox"/> | | 30 |
| g) a urban study | yes | 1 | <input type="checkbox"/> | | 2 |
| | no | 2 | <input type="checkbox"/> | | 31 |
| (any other please specify) | | | <input type="checkbox"/> | | 32 |

2.5 Please indicate by means of a tick/s, which of the following activities you engaged in during field excursion/s during your years at school.

While in the field did you: -

- | | | | | | |
|--|-----|---|-------------------------------------|--|----|
| a) listen to talks presented by the teacher or a 'guide' | yes | 1 | <input checked="" type="checkbox"/> | | 1 |
| | no | 2 | <input type="checkbox"/> | | 33 |
| b) observe and record information in the field | yes | 1 | <input type="checkbox"/> | | 2 |
| | no | 2 | <input checked="" type="checkbox"/> | | 34 |
| c) record measurements taken in the field | yes | 1 | <input checked="" type="checkbox"/> | | |
| | no | 2 | <input type="checkbox"/> | | 35 |
| d) complete prepared worksheets. | yes | 1 | <input type="checkbox"/> | | 3 |
| | no | 2 | <input checked="" type="checkbox"/> | | 36 |
| e) interview people | yes | 1 | <input type="checkbox"/> | | - |
| | no | 2 | <input checked="" type="checkbox"/> | | 37 |
| f) do field sketches | yes | 1 | <input checked="" type="checkbox"/> | | 7 |
| | no | 2 | <input type="checkbox"/> | | 38 |
| g) do traffic counts | yes | 1 | <input type="checkbox"/> | | 3 |
| | no | 2 | <input checked="" type="checkbox"/> | | 39 |
| h) do soil and rock sampling | yes | 1 | <input checked="" type="checkbox"/> | | |
| | no | 2 | <input type="checkbox"/> | | 40 |
| i) take photographs | yes | 1 | <input checked="" type="checkbox"/> | | |
| | no | 2 | <input type="checkbox"/> | | 41 |
| (any other activity please specify) | | | <input type="checkbox"/> | | - |

.....

2.6 Which activities did you find most enjoyable?

*Studying outside the classroom
 Making your own observations and
 researches*

1
 43-44

2.7 Which activities did you find least enjoyable?

*Marching, or heavy work and...
marching alone. Tired...
Marching by feet for a long distance and
hunger*

1
45-46

2.8 During these excursions did you work (Tick the appropriate block/s.)

- a) alone
- b) in partners
- c) with small groups
- d) with big groups
- e) as a class
- (any other way please specify)

1
 2
 3
 4
 5
 6

3
47

2.9 When you went out for the excursion did you go as:

- a) a class group
- b) a standard group
- c) a school group
- (Please tick the appropriate box)

1
 2
 3

1
48

2.10 If you attended any excursions could you please write a few sentences to indicate your impressions of fieldwork.

*Field work is one of the most enjoyable
exercises in geography. It develops a
good understanding of geographical
phenomena.*

1
49-50

3 b. PRESENT COLLEGE FIELDWORK EXPERIENCE.

3.1 Fieldwork is conducted at my College.

- a) yes
- b) no
- (Please tick the appropriate block)

1
 2

2
51

3.2 If the answer is yes:

How often is fieldwork conducted at your College?

- a) once or twice a year
- b) within each unit of the syllabus as it is taught.
- c) none for the whole year

1
 2
 3

3
52

9 (Please tick the appropriate block)

3.3 What was the duration of the excursion/s you have done?

- a) between an hour to a few hours yes 1 no 2
 - b) between half-day to a day yes 1 no 2
 - c) a few days to a week or more yes 1 no 2
- (Please tick the appropriate block/s)

-

53

-

55

3.4 Please indicate by means of a tick/s, which of the following activities you engaged in during College field excursion/s. While in the field did you:

- a) listen to talks presented by the teacher or a 'guide' yes 1 no 2
 - b) observe and recorded information in the field yes 1 no 2
 - c) record measurements taken in the field yes 1 no 2
 - d) complete prepared worksheets. yes 1 no 2
 - e) interview people yes 1 no 2
 - f) do field sketches yes 1 no 2
 - g) do traffic counts yes 1 no 2
 - h) do soil and rock sampling yes 1 no 2
 - i) take photographs yes 1 no 2
- (any other activity please specify) yes 1 no 2

2

56

2

57

2

58

1

59

1

60

2

61

2

62

2

63

2

64

2

65

.....

.....

.....

.....

3.5 Which activities did you enjoy most?

.....

.....

.....

1

66-67

3.6 Which activities did you enjoy least?

.....

.....

.....

1

68-69

3.7 During these College fieldwork excursions did you work;

(Tick the appropriate block/s)

- a) alone
 - b) in partners
 - c) in small groups
 - d) in big groups
 - e) as a class
- (any other way please specify)

1	<input type="checkbox"/>
2	<input type="checkbox"/>
3	<input type="checkbox"/>
4	<input type="checkbox"/>
5	<input type="checkbox"/>
6	<input type="checkbox"/>

<input type="checkbox"/>

70

.....

.....

.....

.....

3.8 When you went on the excursion did you go as a:- (Please tick the appropriate block)

- a) class group
 - b) standard group
 - c) College group
- (any other way please specify)

1	<input type="checkbox"/>
2	<input type="checkbox"/>
3	<input type="checkbox"/>
4	<input type="checkbox"/>

<input type="checkbox"/>

71

.....

.....

.....

.....

3.9 Could you please write a few sentences to indicate your fieldwork impression while at College.

.....

.....

.....

<input type="checkbox"/>

72-73

C THE VALUE OF FIELDWORK.

4. Please indicate your personal attitude towards Geographical fieldwork.

- a) it is an integral and essential part of the Geography curriculum
 - b) it is a reasonably important part of the Geography curriculum
 - c) it is of little value in the Geography curriculum
 - d) it is actually a waste of time
- (Please tick the appropriate block)

1	<input checked="" type="checkbox"/>
2	<input type="checkbox"/>
3	<input type="checkbox"/>
4	<input type="checkbox"/>

<input type="checkbox"/>

74

5.1 The following claims have been made with regard to the benefits of fieldwork. Please rate each of the following claims from 1 to 5 as follows:

- 1 indicates that you attach no importance to the claim.
- 2 indicates that you attach little importance to the claim.
- 3 indicates that you attach some importance to the claim.
- 4 indicates that you attach great importance to the claim.
- 5 indicates that you attach very great importance to the claim.

Fieldwork:

a) develops creativity in the pupil;	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input checked="" type="checkbox"/>	75
b) develops a pupil's sense of responsibility;	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input checked="" type="checkbox"/>	5 <input type="checkbox"/>	76
c) trains a pupil to be self-sufficient;	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input checked="" type="checkbox"/>	5 <input type="checkbox"/>	77
d) develops a positive self-image in the pupil;	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input checked="" type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	78
e) develops a pupil's interests and talents;	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input checked="" type="checkbox"/>	79
f) develops a pupil's awareness of his environment;	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input checked="" type="checkbox"/>	80

g) develops a pupil's interest in the community;	1 <input type="checkbox"/>	2 <input checked="" type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	81
h) develops a pupil's ability to work with other people;	1 <input type="checkbox"/>	2 <input checked="" type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input checked="" type="checkbox"/>	82
i) develops a pupil's powers of observation;	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input checked="" type="checkbox"/>	83
j) develops a pupil's skill in using primary and secondary resource material;	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input checked="" type="checkbox"/>	84
k) develops a pupil's skill in using statistical data;	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input checked="" type="checkbox"/>	85
l) develops a pupil's ability to understand geographical terms;	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input checked="" type="checkbox"/>	86
m) increases a pupil's ability to solve problems;	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input checked="" type="checkbox"/>	5 <input type="checkbox"/>	87
n) develops a pupil's ability to formulate and test hypotheses;	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input checked="" type="checkbox"/>	88

(Please check that the above all have a 1-5 rating)

5.2 Please indicate whether there are any other ways in which you believe that fieldwork may benefit the pupil

*It develops mature conversation
 It also develops discipline in the field
 and also encourages pupils to work as a class.
 It also covers that gap between the student and a teacher (team work)*

5.3 The following factors are ways in which fieldwork may be considered to be of benefit to the teachers. Please rate from 1-5 the importance of each factor as it applies to the teaching of Geography

- 1 is of no importance
 2 is of little importance
 3 is of average importance
 4 is very important
 5 is of very great importance

Fieldwork can benefit the teaching of Geography because it enables the teacher:

- | | | | | | | | | | | | |
|--|---|--------------------------|---|-------------------------------------|---|-------------------------------------|---|-------------------------------------|---|-------------------------------------|---------|
| a) to assess the pupil's understanding of the subject; | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input checked="" type="checkbox"/> | 5 |
| b) to measure the pupil's progress in the subject; | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input checked="" type="checkbox"/> | 11
3 |
| c) to assess the pupil's aptitude for the subject; | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input checked="" type="checkbox"/> | 12
5 |
| d) to gain a better insight into the pupil's personality; | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input checked="" type="checkbox"/> | 5 | <input type="checkbox"/> | 13
1 |
| e) to establish a better rapport with the pupils; | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input checked="" type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> | 14
3 |
| f) to motivate the pupils towards a better attitude to the subject; | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input checked="" type="checkbox"/> | 5 | <input type="checkbox"/> | 15
4 |
| g) to spend more time with individual pupils; | 1 | <input type="checkbox"/> | 2 | <input checked="" type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> | 16
2 |
| h) to link the theoretical aspects of the subject to the 'real world' situation; | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input checked="" type="checkbox"/> | 17
5 |
| i) to deal more effectively with problematic areas in the syllabus; | 1 | <input type="checkbox"/> | 2 | <input checked="" type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> | 18
2 |
| j) to deal more effectively with mixed ability groups; | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input checked="" type="checkbox"/> | 5 | <input type="checkbox"/> | 19
1 |
| k) to develop his/her interests in the subject with the pupils; | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input checked="" type="checkbox"/> | 20
5 |
| l) to prepare the pupil more effectively for examinations; | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input checked="" type="checkbox"/> | 5 | <input type="checkbox"/> | 21
2 |
| m) to enhance the co-operation between the different subjects in the school. | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input checked="" type="checkbox"/> | 22
5 |

5.4 Please indicate any other ways in which you feel that fieldwork can benefit teaching.

It is where the student & teacher interact directly. So that pupils were interest for the subject as it is a game (enjoyable)

1
24-25

5.5 The following factors are ways in which fieldwork may be considered to enhance Geography. Please rate from 1-5 the importance of each of the factors to Geography.

- 1 is of no importance
- 2 is of little importance
- 3 is of average importance
- 4 is very important
- 5 is of very great importance

Fieldwork may enhance Geography because it:

a) increases the 'popularity' of the subject;	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	26
b) develops a wider interest in the subject;	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	27
c) creates a greater awareness of the central issues within the subject;	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input checked="" type="checkbox"/>	5	<input type="checkbox"/>	28
d) improves the pupil's attitude to the subject;	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	29
e) develops better learning techniques within the subject;	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	30
f) improves the teaching of the subject;	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	31
g) enhances the status of the subject;	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input checked="" type="checkbox"/>	5	<input type="checkbox"/>	32
h) gives the community an opportunity to develop an awareness of the subject;	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	33

(Please check that the above all have a 1 -5 rating.)

5.6 Please indicate any other ways in which you believe fieldwork can enhance Geography as a subject:

.....

.....

..... 34-35

D. THE ORGANISATION AND MANAGEMENT OF FIELDWORK IN SCHOOLS.

6.1 How often should fieldwork be conducted at a school?

- a) once or twice a year?
- b) as often as the subject matter lends itself to fieldwork

c) within each unit of the syllabus as it is taught
(Please tick one block only)

3	<input type="checkbox"/>	<input type="checkbox"/>	36
---	--------------------------	--------------------------	----

6.2 Should the fieldwork excursions be conducted as a,
a) class group
b) standard group
c) school group
(Please tick the appropriate box)

1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	37
2	<input type="checkbox"/>		
3	<input type="checkbox"/>		

6.3 Should the fieldwork excursions be conducted during;
a) geography periods
b) the school day
c) over the week-ends
d) during vacations
(Please tick the appropriate block)

1	<input checked="" type="checkbox"/>	<i>depends on each school</i>	<input type="checkbox"/>	38
2	<input checked="" type="checkbox"/>			
3	<input type="checkbox"/>			
4	<input checked="" type="checkbox"/>			

6.4 Do you believe that fieldwork is most valuable when done:
a) at Junior Secondary level
b) t Senior Secondary level
c) at College of Education
d) throughout the High School and Colleges of Education
(Please tick one block only)

1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	39
2	<input checked="" type="checkbox"/>		
3	<input type="checkbox"/>		
4	<input checked="" type="checkbox"/>		

6.5 How do you believe that follow-up of fieldwork ought to be done?
a) by means of a written report?
b) by means of a verbal report?
c) by means of a worksheet?
d) by means of discussion?
(Please tick one block only)

1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	40
2	<input type="checkbox"/>		
3	<input checked="" type="checkbox"/>		
4	<input type="checkbox"/>		

6.6 In cases where a numerical mark has been given for fieldwork, do you feel that these marks should be:
a) incorporated into term marks only?
b) incorporated into examination marks only?
c) incorporated into the year mark only?
d) not incorporated into any of the above?
(Please tick one block only)

1	<input type="checkbox"/>	<input type="checkbox"/>	41
2	<input type="checkbox"/>		
3	<input type="checkbox"/>		
4	<input type="checkbox"/>		

There should be marks in geography allocated for practice

6.7 Do you believe that fieldwork at third year level should be marked internally by the teacher concerned, but moderated by an external examiner for inclusion into the Secondary Teachers Diploma Examination?

- a) yes
- b) no

(Please tick the appropriate block)

1	<input checked="" type="checkbox"/>	1
2	<input type="checkbox"/>	42

E. PROBLEMS IN CONDUCTING FIELDWORK IN GEOGRAPHY.

7.1 The following twelve sections broadly cover the High School Geography Syllabus. In your opinion to what extent does each section of the syllabus facilitate the introduction of fieldwork? Please use the following rating:

- 1 indicates that the section has no potential for the introduction of fieldwork.
- 2 indicates that the section has little potential for the introduction of fieldwork.
- 3 indicates that the section has some potential for the introduction of fieldwork.
- 4 indicates that the section has great potential for the introduction of fieldwork.
- 5 indicates that the section has a very great potential for the introduction of fieldwork.

a) map reading and interpretation	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	45
b) climatology and weather studies	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	43
c) geomorphology	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	44
d) natural regions	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	45
e) economic Geography	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input checked="" type="checkbox"/>	5	<input type="checkbox"/>	46
f) developing and developed countries and their economic development.	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	47
g) urban settlement Geography	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	48
h) rural settlement Geography	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	49
i) population Geography	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	50
j) South Africa	1	<input type="checkbox"/>	2	<input checked="" type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input type="checkbox"/>	51
k) the Regional Geography of Africa	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	52

- 1) the Geography of regions outside Africa

1	<input checked="" type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input type="checkbox"/>		<input type="checkbox"/>
											54

(Please check that all the above have a 1 - 5 rating)

- 7.2 The problems listed below are ones which could arise in the conducting of fieldwork. Please indicate by placing a tick in the appropriate block whether you consider each of the problems to be:

- 1) a very major problem;
 2) a major problem;
 3) a average problem;
 4) a minor problem;
 5) not a problem; in conducting fieldwork.

a)	The limited time at the pupil's disposal.	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>		<input type="checkbox"/>
													55
b)	The pupils' lack of motivation.	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>		<input type="checkbox"/>
													56
c)	The pupils' lack of prior training in the Primary school in the basic skills needed for fieldwork.	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>		<input type="checkbox"/>
													57
d)	The limited time at the teacher's disposal.	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>		<input type="checkbox"/>
													58
e)	The length of the syllabus to be covered in each standard/class.	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input checked="" type="checkbox"/>	5	<input type="checkbox"/>		<input type="checkbox"/>
													59
f)	The constraints of the examination system, it is not examined.	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input checked="" type="checkbox"/>	4	<input type="checkbox"/>	5	<input type="checkbox"/>		<input type="checkbox"/>
													60
g)	The lack of suitable sites nearby.	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>		<input type="checkbox"/>
													61
h)	The lack of teacher's expertise in conducting fieldwork.	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>		<input type="checkbox"/>
													62
i)	The size of the class.	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input checked="" type="checkbox"/>	5	<input type="checkbox"/>		<input type="checkbox"/>
													63
j)	The diverse abilities of the pupils.	1	<input type="checkbox"/>	2	<input checked="" type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input type="checkbox"/>		<input type="checkbox"/>
													64
k)	The cost factor, ie. transport is too expensive for our limited budget.	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>		<input type="checkbox"/>
													65

(Please check that all the above have a 1 -5 rating)

7.3 Please indicate any other problems which you have encountered in conducting fieldwork.

Barriers available on the field work especially in mountainous area.

66-67

68-69

7.4 Do you intend to do fieldwork during your teaching career?

YES

NO

70

71

Thank you very much for your co-operation.

Tokozile Ngquba (Miss)
M.Ed. Candidate
Rhodes University
GRAHAMSTOWN

c/o Clarkebury College of Education
Private Bag X11
CLARKEBURY
5024

APPENDIX BGEOGRAPHY FIELDWORK AT COLLEGES OF EDUCATION

An interview schedule for third year student teachers specialising in Geography.

This is a follow-up to the questionnaire which you completed some time in May. I would be very pleased if you can assist with answers to the following questions.

1. From your responses it appeared that fieldwork is used so little at the moment in Transkeian schools. Why is that so?

2. If there are so many problems, are they worthwhile solving so that fieldwork can be used?

3. If these problems can be solved could you feel equipped to conduct fieldwork?

4. If yes, why?

5. If no, why?

6. From the responses of those who had experiences of fieldwork it was gathered that the activities they enjoyed least were filling in prepared worksheets, doing field sketches and interviewing people. Can you perhaps explain the possible reasons for that?

7. Generally students claim that they do not like listening as is the case in formal lessons, but surprisingly more than 60% respondents indicated that they enjoyed listening to talks given by the teacher in the field. How can that be explained?

8. The general feeling is that fieldwork must be done throughout the school career. Do you agree with that?

9. Give reasons for your answer?

10. In terms of evaluating fieldwork respondents appeared to prefer it to be evaluated in the form of written report as against verbal report. Do you agree?

11. Why?
-
12. From the respondent's response it was discovered that they felt that there is no need for fieldwork to be examined at the end of the year. Do you agree?
-
13. Why do you think that way?
-
14. How do you think fieldwork should be assessed?
-
15. From the respondent's responses it appeared that map reading as well as geomorphology is important for fieldwork. Why?
-
16. What are the other areas in syllabus that can be used for fieldwork?
-
17. Half of the respondents claimed that lack of suitable sites for conducting fieldwork is no problem at all, the other half felt that it is a major problem. Can you clarify the possible reasons for these differences?
-

THANK YOU.

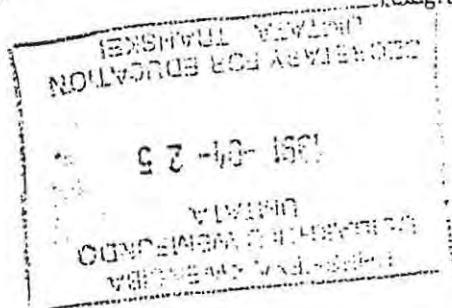
APPENDIX C

LETTER FROM RHODES UNIVERSITY REQUESTING PERMISSION TO VISIT THE
TRANSKEIAN COLLEGES OF EDUCATION

**Department of Education
RHODES UNIVERSITY**

P.O. Box 94, Grahamstown, 6140 SOUTH AFRICA

Telegrams 'Rhodescol' Fax (0461) 2 5049 Telephone (0461) 2 2023 ext 383/384



19th April 1991

TO WHOM IT MAY CONCERN

Miss T. Ngquba is a Masters of Education Student at Rhodes University. Miss Ngquba's study area is concerned with the perceptions of College of Education Students regarding the role and value of fieldwork in geography.

The research requires her to administer a questionnaire at Colleges of Education in Transkei and will of necessity involve the geography specialist students.

We request your permission to allow her to undertake the research in the Colleges of Education under your jurisdiction.

Yours faithfully

SUPERVISOR

DEAN

APPENDIX D

LETTER FROM THE RESEARCHER REQUESTION PERMISSION TO VISIT THE
TRANSKEIAN COLLEGES OF EDUCATION

Clarkebury College of Education
Private Bag X11
CLARKEBURY
5024
18th April 1991

The Director General
Department of Education
Private Bag X 5003
UMTATA

Dear Sir

RE: M.ED RESEARCH FOR T. NGQUBA IN S.T.D. COLLEGES OF EDUCATION.

I wish to ask for your permission to visit the Transkeian S.T.D. Colleges of Education to conduct some research. The research is aiming at finding out the perceptions of College Students towards geographical fieldwork. This piece of work will be beneficial to the Transkeian teachers and lecturers.

I hope my application will meet your favourable consideration.

Yours faithfully



T. NGQUBA (MISS)

REPUBLIC OF TRANSKEI

TEACHER TRAINING COLLEGES

AFFILIATED TO

THE UNIVERSITY OF TRANSKEI

SECONDARY TEACHERS DIPLOMA

SYLLABUS FOR GEOGRAPHY

C O N T E N T S

- A. INTRODUCTION
- B. COURSE OUTLINE
- C. SYLLABUS IMPLEMENTATION

1. OBJECTIVES OF THE COURSE

1.1. OBJECTIVES

- 1.1 To train student teachers to teach geography in primary and secondary schools
- 1.2 To enrich them academically so that they are confident in handling geography in these standards
- 1.3 To help student teachers learn how to help pupils acquire competency and skill in the use and interpretation of maps and other basic aids
- 1.4 To enable them to plan and present lessons in geography
- 1.5 To help them learn how to collect and construct simple teaching aids from locally available and inexpensive materials
- 1.6 To provide the student teacher with expertise that will enable them to vary their methods of teaching and to utilize a variety of evaluation methods, including self evaluation

The following has been considered in the designing of the syllabus :

1. Many students who come to the teacher training colleges lack basic knowledge of geography. The first year is thus devoted to enriching and upgrading students in the subject content and basic geographical skills
2. The second and third years concentrate on the subject content and methodology, in preparation for practice teaching
3. For regional studies, teacher trainees need to understand the concepts of developing and developed countries and a case study approach has been adopted

CONTENT - STD I

1. Astronomical and mathematics Geography
 - 1.1 The solar system
 - 1.2 The earth - shape, size, movements and the results thereof
 - 1.3 Lines of latitude and longitude
 - 1.3.1 Latitude and noon altitude of the sun
 - 1.3.2 Longitude and time
 - 1.4 The moon - phases and eclipses
2. Mapwork
 - 2.1 Atlas work
 - 2.1.1 How to find the position of a place
 - 2.1.2 Practice in the use of the atlas index
 - 2.2 Map projection
 - 2.3 Interpretation of 1:50 000 topographical maps
 - 2.3.1 Marginal information
 - 2.3.1.1 True and Magnetic North
 - 2.3.1.2 Scale

UNIT 2: MAPS AND PHOTOGRAPHS

- 2.3.1.3 Conventional signs
- 2.3.1.4 The title of the map
- 2.3.1.5 Relief - The relationship between natural and man made features on a map
- 2.3.1.6 Simple recognition of features on a map
- 2.3.1.7 Calculation of simple cross-sections
- 2.3.1.8 Calculation of gradient

2.4 Air photography

- 2.4.1 Types of air photos
- 2.4.2 Simple explanation of how a vertical air photograph is taken
- 2.4.3 The sequence of vertical photos and how they overlap
- 2.4.4 Information on the margins
- 2.4.5 Calculation of scale
- 2.4.6 Recognition of features on an air-photo
- 2.4.7 Simple interpretation of S.A. 1 : 50 000 Topo-sheets using vertical photographs of the same area
- 2.4.8 Students should get practice in viewing stereo pairs through stereoscopes and magnifying glasses
- 2.4.9 Interpretation of ortho-photo maps

3. Geomorphology and Oceanography

- 3.1 The earth's crust : - composition and structure
- 3.2 Rock types : origin, characteristics and importance of igneous, sedimentary and metamorphic rocks
- 3.3 Internal forces that shape the earth and resultant landforms
 - 3.3.1 Continental drift
 - 3.3.2 Plate-tectonics
 - 3.3.3 Vulcanism
 - 3.3.4 Folding
 - 3.3.5 Faulting
 - 3.3.6 Warping
 - 3.3.7 Earthquakes
 - 3.3.8 Areas of crustal instability and shield areas
- 3.4 External forces that shape the earth

- 3.4.1 Erosion : agents and resultant landforms
- 3.4.2 Weathering
- 3.4.3 Mass wasting
- 3.5 Drainage basins and pattern (e.g dendritic, trellis, rectangular, radial, deranged), river, capture, river, profiles, grade
- 3.6 Topography associated with horizontal and inclined strata
- 3.7 Evolution of landscapes
- 3.7.1 Peneplanation and pediplanation
- 3.7.2 Concept of dynamic equilibrium

4. Soils

- 4.1 Soil forming factors
- 4.2 Soil erosion and conservation

CONTENT -STD II

1. Climatology

- 1.1 The seasons
- 1.2 The atmosphere - composition and structure
- 1.3 Temperature
- 1.3.1 Insolation, radiation, conduction, convection
- 1.3.2 Factors affecting the horizontal variation of temperature - latitude, the effect of land and water distribution, relief, winds, ocean currents, soil colour, cloud cover, rainfall
- 1.3.3 Lapse rates - environmental lapse rate, temperature inversion dry adiabatic lapse rate, wet adiabatic lapse rate, wet adiabatic lapse rate
- 1.4 Moisture in the atmosphere
- 1.4.1 Absolute and relative humidity, dewpoint temperature
- 1.4.2 Simple cloud classification and recognition
- 1.4.3 Precipitation : rain, hail, snow, dew frost
- 1.5 Atmosphere pressure : definition and representation
- 1.5.1 Relationship between pressure and wind

- 1.5.2 General circulation of the atmosphere
 - 1.5.2.1 Primary circulation : (N-S); tricellular arrangement; sub-tropical and polar highs; polar front, I.T.C.Z.
 - 1.5.2.2 Secondary circulation : lows and westerly waves; tropical tropical cyclones, monsoons
 - 1.5.2.3 Tertiary circulation : land and sea breezes, katabatic flow, Chinook, Fohn and Berg winds, Minstral
- 1.6 Weather processes:
 - 1.6.1 Causes of uplift
 - 1.6.2 Thermal stability and instability
 - 1.6.3 Convergence and instability
 - 1.6.4 Some atmospheric models
 - 1.6.5 Geostrophic flow
 - 1.6.6 The thunderstorm
 - 1.6.7 Mid-latitude cyclones
 - 1.6.8 Tropical cyclones
 - 1.6.9 Practical work
 - 1.6.9.1 Use of weather instruments, keeping weather records, interpretation of simple maps and diagrams
 - 1.6.9.2 Interpretation of synoptic weather maps with special reference to South Africa

2. Population Geography

- 2.1 Population characteristics
- 2.2 Population distribution and density
- 2.3 Population movements
- 2.4 Population explosion
- 2.5 Practical work : statistical diagrams and maps

B. CONTENTS - STD III1. Settlement Geography

1.1 Rural settlement

1.1.1 Types

1.1.2 Factors influencing location and form

1.2 Urban settlement

1.2.1 Factors affecting site, situation and functions of urban settlements

1.2.2 Urban morphology

1.2.3 Models of urban structure

1.2.4 Distribution of urban centres

1.2.5 Spheres of influence

1.2.6 Urban hierarchies

1.2.6.1 Primate Metropolitan Area

1.2.6.2 Major Metropolitan Areas

1.2.6.3 Metropolitan areas

1.2.6.4 Major country towns

1.2.6.5 Minor country towns

1.2.6.6 Simple central place theory

1.2.6.7 Urban expansion

1.2.6.8 Urban problems

1.2.6.9 Practical work

Interpretation of settlement types and morphology through topographical map analysis

2. Economic Geography

2.1 Definition : primary, secondary, tertiary and quaternary activities, renewable and non-renewable resources

2.2 Primary activities

2.2.1 Farming : commercial and subsistence

2.2.2 Mining

2.3 Secondary activities

2.3.1 Light and heavy industry

2.3.2 Factors favouring location of industries

TRANSKEI TRAINING COLLEGES SYLLABUS FOR GEOGRAPHY - STD

- 2.4 Tertiary activities
 - 2.4.1 Service industries
 - 2.4.2 Stages of economic development
- 2.5 Practical work

C. METHODOLOGYSECOND YEAR

1. The place of geography in the school curriculum
2. Aims and objectives in the teaching of geography
3. Past and present trends in the teaching of geography
4. The school syllabus
 - 4.1 Basic principles taken into account in compiling the syllabus
 - 4.2 Critical study of the syllabus for secondary school geography
 - 4.3 Drawing up of schemes and records of work
 - 4.4 Planning of single lessons, units of work

TRANSKEI TRAINING COLLEGES SYLLABUS FOR GEOGRAPHY - STDMETHODOLOGYTHIRD YEARMethods and organisations

- 1 Application of the principles of General didactics to the teaching of geography
- 2 Methods specific to and particular to the teaching of geography and secondary level
- 3 Difficulties encountered in the teaching of Geography with special reference to mapwork, practical work, weather charts, note making, assignments
- 4 Follow up of practice teaching

Teaching AidsEvaluation

Tests and examinations with reference to Geography
Continuous assessment

Marking

How to do remedial work

N.B. STD I AND STD II will be internally examined.

For STD III two question papers will be set, one on the content and the other one on methodology. Each of these papers will be of 2 hours duration and will be out of 200 marks

TIME ALLOTMENT

Suggested guidelines 8 - 35 minutes sessions per week

CONTENT

CONTENT AND METHOD INTEGRATED

PRACTICAL WORK BY STUDENT

1. GENERAL GEOGRAPHIC TECHNIQUES

1.1 MAPS

- functions of maps, kinds of maps, the map legend, map scales, map projections, co-ordinates, orientating a map, bearings on a map.
- introduction to contour maps, how a contour map should be viewed, identification of landforms.

Using an atlas to find locations.
Simple calculations using scales.

How to make and read a map. U
How to make and read a map. EU
an atlas..

1.2 PHOTOGRAPHS

- Types of photographs, advantages and disadvantages of photographs, scales of aerial photographs, analysis and interpretation of vertical aerial photographs.

Identifying features on aerial photographs using stereoscopes.

Interprete aerial photographs.

1.3 FIELDWORK

- significance of a fieldtrip, preparation by teacher, by students, collection of data, analysis and presentation of data.

Making direct observation, making drawings, collecting data.

Formulating a problem, a hypothesis, collecting data analysing and interpreting data.

1.4 DIAGRAMMATIC REPRESENTATION OF STATISTICS

- use and drawing of graphs and diagrams.

Making graphical and diagrammatic representation of data.

GLACIOLOGY

2.1 The internal structure and composition of the earth.

2.2 Crustal rocks

2.3 Internal forces *responsible for shaping* the earth and the resultant landforms : isostasy, continental drift, warping, folding, faulting, earthquakes, volcanism.

Collecting specimens of rocks

Outdoor trips to identify, landforms. Identification of landforms from tape-graphical sheets and aerial photographs.

Collecting specimens

Illustrating the landforms by means of contour, lines. Taking pictures.

3. POPULATION GEOGRAPHY

3.1 The distribution and density of world population : Arithmetic, Physiological, agricultural densities, factors influencing ecumene and non-ecumene areas of the world.

Constructing and interpreting representation techniques such as maps, tables diagrams, graphs.

Use statistics to draw graphs, diagrams and maps.

3.2 Population characteristics : birth rates, death rates, factors influencing, birth and death rates. *(+ growth rates)*

3.3 Age structure and population pyramids - division of age pyramids according to sex.

3.4 Population movements; causes and classification.

Using the system's approach in teaching push and pull factors.

3.5 Urban/Rural ratio

3.6 Rapid growth and population explosion.

4. ASTRONOMICAL GEOGRAPHY

Observation of the solary system

4.1 THE SOLAR SYSTEM

Making of diagrams

- the milky way, the planets, the earth's movements and results.

Making observation of the stars

5. CLIMATOLOGY

5.1 ATMOSPHERE

- composition and structure, heating, horizontal and vertical temperature gradients, lapse rates, moisture in the atmosphere.

Observation and recording of elements of weather. Use of meteorological instruments. Compiling the information. Calculating averages.

Representing the information on maps, graphs, diagrams.

5.2 ATMOSPHERIC PRESSURE

- pressure units, variations in air pressure, isobars, pressure gradient, wind and wind direction.

Use of a barometer. Introduction to synoptic weather charts.

Collecting information on temperature, wind direction and velocity, cloud cover, precipitation and plotting it on a map.

5.3 GENERAL CIRCULATION OF WIND

- planetary air pressure belts, primary air circulation, the tricellular arrangement.

Interpretation of synoptic maps
Drawing of sketches
Making observations.

CONTENT

CONTENT AND METHOD INTERGRATED

PRACTICAL WORK

1. GENERAL GEOGRAPHIC TECHNIQUES

1.1 TOPOGRAPHICAL MAPS

- measurement of distance and area, calculating gradient, enlargement or reduction of maps, drawing cross-sections, vertical exaggeration, map interpretation.

Exercises on topographical maps.

Models of landforms.

1.2 AERIAL PHOTOGRAPHS

1.3 DIAGRAMATIC REPRESENTATION OF STATISTICS

- graphs and diagrams

Exercises on statistics

2. CLIMATOLOGY

2.1 Causes of air uplift

Experimentation on rising air

2.2 Thermic stability and instability

2.3 Convergence and instability

2.4 Atmospheric models : geotrophic flow, thunderstorms, tornadoes, midlatitude cyclone, tropical cyclone.

Model approach

Identification on weather maps

Set up a weather station and a weather chart.

2.5 Climatic conditions in regions

- moving disturbances in Europe
- Equatorial Africa
- Southern Africa

2.6 Climatic conditions of extent:

- valley climates
- city climates

Outdoor observation and experimentation

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3.2 EROSION

3.2.1 Running water: flow patterns of rivers, types of rivers, the fluvial cycle of erosion, landforms characteristic of erosion and deposition.

3.2.2 The sea as an agent of erosion:
- agents of marine gradation, landforms characteristic of marine erosion, landforms characteristic of marine deposition.

3.2.3 The action of wind:
wind degradation forms, wind aggradation, sand deposition forms.

3.2.4 Karst topography: surface characteristics and subterranean forms.

3.2.5 Ice action:

~~Ice action is a process of erosion, which is a process of erosion, which is a process of erosion, which is a process of erosion, which is a process of erosion.~~

3.3 DRAINAGE BASINS

water supply, size, density, stream patterns, stream piracy, longitudinal profile of a river and the concept of grading, cross-profile of streams.

A field excursion along the river. Collection of specimens. Representation and interpretation of the landforms on contour maps and aerial photographs.

A field excursion along the sea. Topographical sheets and aerial photographs.

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Interpretation of drainage basins on topographical maps. Field excursions along the river.

4. ECOSYSTEMS, ENVIRONMENTAL BALANCE AND CONSERVATION

4.1 SOILS

Soil types, soil characteristics, soil forming factors, Zonal soil types

Drawing of cross-profiles of soils
Collecting samples of soils

Collect samples of soils

4.2 Soil erosion and conservation

4.3 Concept of an ecosystem

- energy flow, nutrient cycle, human impact.

Systems approach to the study of an ecosystem

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5. SIGNIFICANCE OF OCEANS

The ocean as a source of moisture, oxygen supply, protein food, energy supply with associated problems.

5. REGIONAL GEOGRAPHY - TRANSKEI

- situation, climate, nature vegetation
- inhabitants
- general geographical features of Transkei
- agriculture
- mining
- manufacturing industries and transport
- important regions and towns
- factors hampering Transkei's economic developments

Fieldings to areas of interest.
Independent study of aspects like agriculture.

Collecting newspaper reports on Transkei. Collection of topographical maps at areas of Transkei.

CONTENT

CONTENT AND METHOD

PRACTICAL WORK

1. GENERAL GEOGRAPHY TECHNIQUES

1.1 QUANTITATIVE TECHNIQUES

basic mathematical concepts, mean, median and mode, standard deviation.

2. CLIMATOLOGY

2.1 CLIMATE OF SOUTH AFRICA

the influence of the sea, anticyclonic circulation, the wind systems, moving disturbances, aspect, rural-urban contacts.

Weather charts
Set up a weather station for direct observation.

Collection of weather reports from newspapers. Setting up a weather station.

122 2.2 SOUTH AFRICA'S CLIMATIC REGIONS

the subtropical plateau, warm temperate plateau, subtropical lowveld, plateau slopes, sub-tropical coast, temperate coast, mediterranean desert, semi-arid plateau.

3. GEOMORPHOLOGY

3.1 Topography associated with horizontal strata: plateau, mesas, butler, bedlands.

Field excursion
Identification on topographical sheets and aerial photographs
Drawing of cross-profiles

Models of landforms

3.2 Topography associated with inclined strata.

3.3 Topography associated with massive igneous rocks : batholiths, laccoliths, lopoliths, too.

Filming or collecting pictures of landforms.

4. MASS MOVEMENT AND SLOPE FORMS

4.1 Mass movement : soil creep, flowage, landslides and rockfalls.

4.2 Development and characteristics of slopes

4.3 EVOLUTION OF LANDSCAPES

- peneplanation, pedimentation, concept of dynamic equilibrium.

5. ECONOMIC GEOGRAPHY

5.1 Renewable and non-renewable resources

5.2 Utilisation of resources

- primary economic activities
- secondary activities
- tertiary activities (with examples taken from South Africa).

6. SETTLEMENT GEOGRAPHY (examples from South Africa)

6.1 Classification in terms of size and complexity, function and pattern.

6.2 Rural Settlements

function, pattern, factors influencing life, situation and form depopulation, planning and development strategies, patterns in South Africa.

6.3 Urban settlements

Urbanisation, location of cities, functions, distribution morphological structure, land-use zones, models of urban structure, growth and expansion, problems and possible solutions.

The use of a clinometer in determining slope gradients during a field excursion.

A visit to where resources are exploited and to where they are processed.

Simulations to involve pupils in choosing location and sites. Fieldtrips to rural, urban areas to look at their location, physical environment, transport routes, pattern etc. Drawing of sketches.

Using topographical sheets draw profiles along contour lines to illustrate slope forms.

Collection of news articles on economic matters.

Fieldtrips. Making of settlement models. Analyse topographical map sheets.

TRANSKEI COLLEGES OF EDUCATION SYLLABUS
FOR GEOGRAPHY METHODOLOGY - STD
COURSE OUTLINE

STD I

1. TEACHING AIDS

1.1 Chalkboard Work

Layout of:

- (a) Diagrams and sketches
- (b) Writing of the mainpoint scheme - e.g. new concepts, terms, and writing of questions.

1.2 Charts/Pictures/Photographs

e.g. diagrams, graphs, maps.

1.3 Concrete Models (Use of these lessons)

(i) Commercially made models (Use of these)

- (a) Globes
- (b) Tellurion

(ii) Teacher Made Models

- (c) Cardboard-cuts models
- (d) Papier-made models
- (e) Sand-tray models
- (f) Glass models
- (g) Polystyrene models
- (h) Plaster of Paris models
- (i) Clay models
- (j) Wood models

1.4 Mapwork

- (a) Use of an Atlas
- (b) Wall maps

2. PLANNING OF SINGLE LESSON (To be done in April before Home Teaching)

2.1 (a) Routine information

- (b) Writing of lesson topics
- (c) Aims and objectives

- (i) Definitions and differentiation between aims and objects
- (ii) Criteria to be used in the writing of aims and objectives
- (iii) Teaching aids - how to state them e.g. a map showing the Relief of Transkei
- (iv) Previous knowledge assumed.

- 2.2 Presentation of lesson
 - (a) Introduction
 - (b) Testing of previous knowledge
 - (c) Stating of topic.
 - 2.3 Development/Exposition of lesson
 - (i) Subheadings
 - (ii) Intergration of content with method
 - (iii) Use of teaching aids
 - (iv) Stating of pupil activities.
 - 2.4 Closure
 - (i) Conclusion
 - (ii) Evaluation
 - (iii) Application.
 - 2.5 Pupils Activity.
 - 2.6 Chalkboard summary
 - Layout of chalkboard summary as it would appear on the actual chalkboard when presenting the lesson.
 - 2.7 References: Author, year, title, ref. pp.
3. FOLLOW UP OF HOME TEACHING
 4. THE GEOGRAPHY TEACHER AS LANGUAGE TEACHER
 5. GENERAL METHODS *e.g.*
 - (i) Telling/Lecture/Oral/Narrative
 - (ii) Question and Answer/Socratic/Heuristic
 - (iii) Discussion
 - (iv) Project
 - (v) Inductive

STD II

5. THE SCHOOL SYLLABUS

- i.1 Differences between Higher Grade and Standard Grade.
- i.2 General/Basic principles taken into account when compiling the syllabus e.g. Aims, a comprehensive syllabus, Systematic Progression, the Relationship between different aspects, The Relationship between Geography and other Subjects.

1.3 Specific principles (See PRINCIPLES as laid out in SECONDARY SCHOOL SYLLABUS)

You should handle everything under the following headings as laid out in the school syllabus.

- (a) Nature of Geography
- (b) General education of the pupils
- (c) Objectives
- (d) Teaching approaches
- (e) Teaching techniques
- (f) Differentiation
- (g) Examinations.

1.4 Critical study of the syllabus for Secondary School Geography.

PLANNING OF SINGLE LESSONS (continued) WITH EMPHASIS ON DETAILS

PLANNING AND EQUIPING A GEOGRAPHY ROOM

PAST AND PRESENT TRENDS IN THE TEACHING OF GEOGRAPHY

D. METHODS SPECIFIC AND PARTICULAR TO THE TEACHING OF GEOGRAPHY

- (a) Mapwork and vertical aerial photographs
- (b) News Geography
- (c) Projects and assignments
- (d) Fieldwork
- (e) Game playing in Geography *Games and Simulations*
- (f) Note taking and note making
- (g) Better diagrams and sketches
- (h) Practical work.

TEACHING AIDS CONTINUED

- (i) To teach about the rest of the commercially produced and teacher made aids.
e.g. Stevenson screen.

- (ii) How to improvise.

FOLLOW UP PRACTICE TEACHING

STD IIIDIFFICULTIES ENCOUNTERED IN THE TEACHING OF GEOGRAPHY AT
SECONDARY SCHOOLS.EVALUATION/ASSESSMENT

- (a) The Nature and Use of Assessment
- (b) Characteristics of a Good Test
- (c) Planning and Constructing Tests
- (d) Writing and Constructing Tests
- (e) Improving Test Quality
- (f) Further ideas for Instructional Planning
- (g) Levels of objectives tested in evaluation/Assessment
e.g. testing of knowledge, comprehension, analysis,
synthesis etc.
- (h) Differences between Objective tests and Essay type tests.
- (i) The Marking Memorandum.

AIMS AND OBJECTIVES

- 15.1 Aims and objectives of Teaching Geography generally.
- 15.2 Aims and objectives of Teaching Geography as found in
School Syllabus.