

President's Education Initiative

LANGUAGE IN THE HUMAN AND SOCIAL SCIENCES
PROJECT

Research conducted

by

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PHASE 1

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PART 1

BACKGROUND TO THE STUDY

During the intermediate phase of school, learners experience a number of important changes in the nature of their education. One of the most dramatic changes is that learners encounter a much broader curriculum. This demands that they deal with a broad range of content and skills in different learning areas for the first time. For many children in South Africa, this is also a time during which they make the shift from primary language instruction to learning through the medium of English. Previous research (Macdonald, 1990; Langan, 1993) has shown that this causes enormous problems for school children, problems that are exacerbated by teaching styles, which depend on the reproduction of facts, rather than the development of sound conceptual understanding and skills.

1. Previous research

1.1 The Threshold Project

In 1990 the Human Sciences Research Council published the findings of the Threshold Project, a five-year, classroom-based research project led by Dr C Macdonald. The findings were published in a series of five specific reports and a consolidated report which covered problems such as the difficulties which children experience when they change medium of instruction, an evaluation of children's English and reasoning skills, an examination of the disparity between English as a subject and English as a medium of instruction, children's school-based and Science learning experiences.

The Threshold Project was the first, large-scale ethnographic study to be undertaken which examined what was happening in what were the separately administered black schools of the apartheid era. The project worked in schools which were part of the Primary English Upgrading Project (PEUP) project in Bophuthatswana - a programme which aimed at increasing the English language skills of teachers while moving from a teacher-centered methodology towards a more child-centered one. Research was also conducted in schools in Soweto run by the then Department of Education and Training (DET) and a private Catholic school in Roodepoort so as to provide a comparative context for evaluating the effectiveness of the PEUP programme.

1.1.1 Language difficulties

The Threshold Project covered much more than we outline below. However, we have extracted the findings from the report which relate to areas covered in our investigation, viz. medium of instruction difficulties and the development of higher level cognitive skills and teaching styles in what are now known as the Human and Social Sciences.

Using different modes of analysis, the findings of the Threshold Report were damning. The report paints a picture of a system where the majority of children stand little chance of expanding their understanding. This is ascribed, in part, to the language demands which are placed on them when they change medium of instruction. The Threshold Report holds English language courses responsible as the courses do not adequately-prepare children-for the language used in textbooks once they begin to use English as the medium of instruction. Thus Macdonald says, after a detailed study

of language used in textbooks, 'At the level of lexis, it would seem that children might have previously encountered not more than half the words used in an extract from a science textbook. At the level of syntax, it seems that even an idealized child would encounter serious difficulties. Up to 60% of the sentences may contain syntactic elements with which the children are unfamiliar. What became clear from an analysis of MAPEP and Day-by-Day (two English second language courses in use at the time at which the research was done) was that the conventions of expository text were not being taught to the children, so that they were likely to experience what has been referred to as "register shock" when they first use formal textbooks' (1990 (a):138).

As part of the research into school-based learning experiences, the Threshold Project team uncovered other problems related to language, one being that teachers did not want to explore the possibility that the change of medium in Std 3 was causing learning difficulties for the pupils. They found that teachers were concerned that the Threshold team might suggest that the use of English be delayed and so blamed the pupils' weak understanding on things such as, '... Too high a pupil/teacher ratio, poor physical conditions and lack of learning aids.' However, once trust had been established between researchers and teachers, teachers spoke of their own problems with using English. (Macdonald 1990 (a):116).

1.1.2 Lack of adequate concept development

A second problem that the Threshold project uncovered concerned concept development. Macdonald found that 'new ideas are not introduced systematically, and by the time the children reach Std 3, they have difficulty coping with the veritable deluge of new ideas which is presented to them' (1990 (a):119). Thus, not only were children coping with a large language deficit, but they lacked the conceptual basis to process their new subjects adequately.

1.1.3 Learning problems linked to teaching style

The third problem is related to teaching styles. While one of the aims of the Primary Upgrading Education Project (PEUP) was the development of children's problem-solving skills, the Threshold Project found that '...the materials and presentation by the teacher has not been oriented towards problems, but rather towards the straight forward acquisition of ideas' (1990 (b):32). To further illustrate teachers' focus on the transmission of information, Macdonald quotes an environmental lesson in a DET school in which the teacher used a toy car and aeroplane to teach different modes of transport. This she felt trivialised the content and missed the opportunity to develop children's reasoning skills through simple questioning such as a discussion of the advantages and disadvantages of various forms of transport might have done (1990(b)).

Difficulties which children experienced were further exacerbated by authoritarian, teacher-centered classrooms where the dominant teaching/learning style was the rote-rhythm method. In DET schools, children spent most of their time in class listening to their teachers, doing very little reading or writing. The predominant pattern of interaction was oral input and data recall questions. The children's class-work books had very little in them. In the assessment of teachers' questioning techniques, Macdonald reports that teachers did not often ask questions that required children to find solutions for problems, but rather asked questions which were aimed at checking that the children were listening to what the teachers had said (b, 1990).

Discussions with teachers revealed their attitudes towards learning. One teacher maintained that rote learning helped children to understand while another said that drilling was an effective method of learning since some children cannot read. The practice of rote learning was reinforced by teachers' concern about completing the syllabus that led them to ignore practical work at the expense of real understanding (Macdonald, 1990(b)).

1.1.4 Teaching of the Human and Social Sciences

With regard to the teaching of the Human and Social Sciences, the Threshold Project found that Environmental Studies - the precursor to Geography which we examine - was poorly taught and the children were left with very few, unconnected pages of text with which to try to make sense of the discipline. This is ascribed to the teachers' inability to communicate attitudes which they feel are essential for the learning of sciences-viz. curiosity, respect for evidence, critical reflection, flexibility and sensitivity to the environment. This shortcoming was reflected by the children's inability to make observations about the world around them, to ask questions, make hypotheses or undertake investigations (1990(b)).

Macdonald concludes, 'One of the general findings of the Threshold Project is that Std 3 children are rarely adequately prepared for the learning task in front of them. The change of medium Rubicon has not been adequately crossed by many of the teachers and officials, and that in many cases, only the Std 3 teachers seem to be sufficiently aware of the extent of the language and learning problem. However the problem is not simply one of language learning, but includes the learning of basic concepts and skills (processes). This problem exists for the teachers and the learners.'(1990 (b):90, 95).

2. Difficulty with Geography texts

Langhan (1993) supported the findings of the Threshold Report and an edited version of his MA thesis was published by the HSRC. Langhan focussed specifically on Std 3 Geography teachers and their ability to work effectively from prescribed Geography texts. He analysed Geography textbooks that were being used in the schools with which he chose to work. He found the books to be a source of difficulty for both learning and teaching. His research included informal interviews with teachers and drop-in visits to schools in order to establish a norm in terms of teachers' attitudes and classroom style. These were followed by two structured interviews six months apart, as well as detailed analyses of selected sections of the Geography texts. In the first interview teachers' understanding of the existing texts was put under scrutiny. In the second interview teachers' comprehension of texts, reworked by Langhan, in which an emphasis was placed on readability, was assessed.

Langhan's research focussed mainly on teachers' ability to process texts. However, his findings are relevant for the research that we have undertaken because teachers' ability to process texts affects their ability to communicate and work with what is contained in them.

2.1 Language difficulties

Langhan confirmed the findings of the Threshold Report with regard to pupils in that he found that there was an 'absence of continuity in the transition from mother-tongue to English medium

instruction' and that pupils demonstrated a low-level of language competence, leading to a heavy reliance on rote learning, as the textbooks were too difficult for them to read and the 'tasks and exercises are beyond the pupils' ability because they are expressed in incomprehensible language and are conceptually too difficult' (1993:137).

In terms of teaching, Langan (1993) found that pupils were completely dependent on the teachers for what they learnt and thus the teachers determined both the quality and the content of the lessons. Because of this, the teachers' interaction with the textbooks was absolutely crucial to the understanding of the pupils. In the initial interviews that Langan (1993) conducted, apart from one, teachers did not express difficulty in understanding the texts. However, in the second set of interviews where detailed attention was paid to teachers' comprehension, he found them to be lacking. Langan lists their difficulties as follows:-

- ? Teachers had limited knowledge of Geography and this lack of background knowledge prevented them from interacting with the texts meaningfully.
- ? Teachers showed poor levels of reading competence, exacerbated by badly written texts. Thus they often misinterpreted the meanings of terms not adequately explained in the text, leading, in some cases, to a misunderstanding of whole texts.
- ? Teachers demonstrated an inability to interpret maps and diagrams as they appeared in the textbook. They were unable to locate referents on maps and did not use keys until prompted.
- ? Teachers did not see themselves in having comprehension problems. (1993:138)

Langan (1993) ascribes the problems that teachers encountered with the textbooks to the nature of the texts. He maintains that they lacked thematic coherence, prepositional fullness and explicitness, suffered from obscure referencing, applied concepts before establishing them, used different terms for the same referent and were written in simple sentences lacking- logical connectors.

In response to the difficulty which teachers experienced with the given texts, Langan (1993) conducted experiments with specially prepared texts, where the difficulties listed above were addressed. In interviews conducted to test the comprehensibility of these texts, he established an improvement in the teachers' ability to interpret and work with the texts which he predicted, would benefit the pupils.

2.2 Teaching difficulties

Langan concludes that it is therefore not only the pupils who have difficulty with textbooks but the teachers as well. The teachers' total reliance on the textbooks means that the content of Geography lessons are based on portions of extracted text '...partially grasped and often misunderstood; provided in largely unintegrated lists of facts extracted by the teacher and taught through the mother-tongue.' Thus the teachers are forced to employ a methodology which he describes as, '...the teaching of unintegrated facts by roteand repeated testing reinforces memorisation and regurgitation.' (Langham, 1993:140)

3. Changes in education policy

Since the time of the Threshold Project much has changed in the country around us. Elections have been held in which, for the first time, all adult South Africans could vote, leading to the installation of the first democratic, both within the education departments and others drawn from outside, have government in South Africa. This has had major implications for education, as educationalists investigated, proposed and are now implementing what they see as the best possible system of education to be delivered to all South African children for the first time in an attempt to equalise educational opportunity.

3.1 Government Policies

Outcomes-based education, as spelt out in Curriculum 2005 - lifelong learning for the 21st century, aims to shift the focus of learning from an emphasis on content to an emphasis on skills. The new approach to education lists the aim of developing amongst others: -

- ? active learners
- ? critical thinking, reasoning, learning relevant and connected to real-life situations
- ? learner-centered; teacher is facilitator, teacher constantly uses group work and team work to consolidate the new approach (National Department of Education, 1997).

3.1.1 New language-in-education policies

New policies in education have two major implications for the schools in which we have worked. The first is that of medium of instruction. Given the history of prescriptive language-in-education policy that led to major political confrontation in 1976, the emphasis in the new system is that the school community should be actively involved in the choice of media of instruction. Thus the Norms and Standards regarding Language Policy, Section 6 (1) of the South African Schools Act, 1996 states: 'Subject to any law dealing with language in education and the Constitutional rights of learners the governing body of the school must determine the language policy of the school.'

The result of this regulation has been that, by and large, votes have been held by school management committees and the majority of parents have voted for English as the medium of instruction normally from as early as possible in their children's school careers. This has led to the change-over from primary language to English as the medium of instruction occurring at different points in pupils' school careers - no longer at the end of Standard Two or Grade Four.

3.1.2 Policy change and the curriculum

Curriculum 2005 also has significance in terms of the organisation of and approach to subjects. It incorporates a more integrated approach to education, combining related subjects into learning areas and shifting the emphasis of learning from content to skills. Teachers will now be called on to identify skills and communicate them. Assessment will change from what children can reproduce to what children can do.

3.2 Inherited problems

Given the findings of the Threshold Report, and given that no major interventions have been made to upgrade the level of English teaching (this is only happening in schools participating in special teacher-upgrade programmes such as TELIP), we can assume that generally children are making the change from primary language to English as the medium of instruction with lower English skills than those reported in the Threshold Project's PEUP schools.

Secondly, if we accept Langhan and the Threshold Project's findings on the nature of teaching what were considered 'content' subjects, there seems to be a large discrepancy between what the new curriculum aims to achieve in the classroom and what is actually happening there. Learning and teaching will have to change dramatically in order to meet the demands of the new curriculum. No longer should teachers rely on pupils' ability to reproduce facts relating to History, Geography or Science. Pupils will have to demonstrate that they are able to exercise skills associated with each learning area. Although schedules have been drawn up by the National Education Department that indicate specific outcomes, performance indicators and assessment criteria, the shift from content to skills teaching will place much greater demands on teachers. These demands entail teachers having a fundamental understanding of the nature of the discipline that they are teaching.

1998 saw the introduction of Curriculum 2005 in Grade One in the primary schools. This implies that the teachers with whom we have worked on this project will need to be in a position to deliver the new system within a few years.

PART 2

AIMS AND OBJECTIVES OF THE PROJECT

1. Aim of the project

Langhan (1993) showed that teachers found it difficult to read badly written Geography texts but with careful and sensitive writing, one could produce texts with a higher level of comprehensibility for the target audience.

This research project investigates an alternative to Langhan's solution, namely teacher's use of texts written in their primary language. Thus we aim to explore:-

- ? whether using primary language texts for preparation, teachers' mastery and coverage of the material they present in the classroom changes so as to include a more effective, learner-centered approach to teaching,
- ? whether having materials in both English and teachers' primary language, has any impact on teaching styles
- ? to what extent changes in teaching style impact on learners' understanding of Geography
- ? medium of instruction policies and practices in the Human and Social Science classroom.

2. Research parameters

2.1 Position of the researchers

As no research is free of bias, we want to make explicit our position. Both research leaders come from an academic background but have worked as both teachers and teacher educators for some time. That this background will colour our research, we have no doubt. It has also influenced the criteria used to measure changes in performance. We firmly believe in the need for what is termed 'progressive teaching methodology' in which children are provided with the opportunity to play an active role in the construction of their knowledge.

Secondly, we believe that all children in South Africa should have equal educational opportunities as is embodied in the directive principles of the national education policy (Gov. Gazette, 24 April 1996)

'The policy contemplated in section 3 shall be directed toward-

- ? The advancement and protection of the fundamental rights of every person guaranteed in terms of the Chapter 3 of the Constitution, and in terms of international conventions ratified by Parliament, and in particular the right of every person to basic education and equal access to educational institutions.
- ? Enabling the education system to contribute to the full personal development of each student.
- ? Achieving equitable education opportunities and the redress of past inequality in education provision.
- ? Providing opportunities for and encouraging lifelong learning.

- ? Achieving an integrated approach to education and training within a national qualifications framework.
- ? Recognising the aptitudes, abilities, interests, prior knowledge and experience of students.
- ? Encouraging independent and critical thought.'

We also believe that the changes in the education department mean that for the first time, there have been serious attempts to overcome the inequities of the past in terms of teaching. All teachers now earn the same salary, depending on their qualifications. All teachers, through the right to join unions in order to represent them, have a voice that was previously suppressed. While material conditions still differ in that township schools have much higher learner/teacher ratios and fewer material resources than suburban schools, the time is drawing near for comparisons between suburban and township school to be made. Although we know that it is idealistic, for the sake of democracy and all the children in the country, one must strive for equal educational opportunities.

2.2 Primary language of pupils and teachers

We have chosen to work with teachers whose primary language is Sotho¹, as one of the research leaders speaks Sotho. This has meant that we worked in schools where the majority of pupils and teachers are primary Sotho speakers.

2.3 Choice of materials

We have chosen to use Sotho material from the educational supplement of *Bona* magazine *Bala 0 Ithute*, as the material already exists. The material is made up largely of experimental work produced by non-government educational organisations. Given that this material is being produced commercially, it is a much more cost-effective strategy for dealing with language deficits in schools than developing new materials. In the third phase of the project, we also use recently published textbooks that represent more up-to-date and experimental material than the books currently in use in the schools.

2.4 School levels

It was originally intended that we should work in Std 4 classes. However, due to the changes in medium of instruction policies within the schools, we worked with a range of teachers who taught from Grade Four to Grade Seven. We felt this would give as full a picture as possible of the teaching of Geography/Human and Social Sciences and of changing language usage patterns in the classroom.

2.5 Video-taping versus audio-taping

Discussion with teachers revealed that they said that they had problems with their lessons being videotaped. They felt that videotaped lessons followed by critical discussion was what they had done during compulsory micro-teaching sessions at training college. Therefore they felt this type of intervention was unnecessary because all the teachers in the project were qualified teachers and had been through this process. They did, however, express the need for feedback on their lessons but felt

¹ We use the term Sotho to refer to the language Sesotho which denotes Southern Sotho

this should come from the researcher who visited their classes. As an alternative, we decided to use audio recording as this is much less intrusive.

3. Objectives of the study

3.1 Establishing the context

We aimed to describe and understand the context in which the project is based. This included having some understanding of the children's home situation, the principal's attitudes to pupils, teachers and the teaching of Geography/Human and Social Sciences and the principal's management strategies *vis a vis* the supervision of teachers. We also took resource provisioning into account so as to know what was available for pupils and teachers.

3.2 Teachers' attitudes to learning and teaching

We aimed to build an understanding of how teachers perceived the process of learning and to what extent this impacted on their practice.

3.3 Use of languages

Since Macdonald (1a, 1990) said that only the Std 3 teachers understood the difficulties which their children faced due to the change in medium of instruction, we wanted to examine how teachers perceived and dealt with primary language (Sotho) and English in their classrooms and to what extent language was seen as a problem in both teaching and learning.

3.4 Working with materials

We aimed to find out what materials teachers had access to, what they thought of these materials, and how they used them. We also wanted to investigate what difficulties teachers had in processing the texts and whether they found the texts which we supplied to be more or less helpful than materials to which they currently had access.

3.5 Teaching methodologies

We planned to investigate how teachers went about imparting new information and skills. This involved examining their presentation, notes given and types of exercises and activities which made up the lesson. Part of this was gauging the orientation of the lesson in terms of teacher- or child-centeredness and to what extent the use of our materials impacted on teachers' methodologies.

3.6 Learning and learning opportunities

In assessing learning as concept development during lessons, we aimed to see how teachers presented new concepts. This entailed examining how new work was introduced with particular reference to making intentions explicit and linking to prior knowledge. We also examined whether new work was resented in an hierarchically logical manner and whether pupils were given on opportunity to actively engage with new ideas. Teachers' questions and pupils' responses were also scrutinised as these constitute an important part of classroom interaction. Pupils tasks and their execution of them were also examined in order to assess how much children had gained from the lessons.

3.7 Teachers as active participants

The final objective of our study was to involve teachers as active participants in the study. We hoped that through discussion of language issues, usability of texts and methodologies that teachers would gain from the time that we spent both in the classrooms and in discussion with them. Through this we hoped to make teachers more critical of their own performance in class and less self-conscious about comments regarding their teaching. We also hoped to increase teachers' critical skills with regard to material assessment and to increase their confidence so that they felt that their opinions are useful and should be included in discussions around education policy.

PART 3

RESEARCH DESIGN

1. Method of research

We are testing an hypothesis viz. that the provision of support material for teachers in their primary language, will lead to improved teaching methods and learning in the classroom. According to Brause and Mayher (1991) the basic idea of hypothesis testing is an experimental design which involves comparison. In our case the comparison involves three sets of lessons. The first lesson is used to establish the norm in teaching styles before we make an intervention. In the second lesson the teacher uses material in Sotho taken from *Bona's Bala O Ithute*. This constitutes our first intervention. In the third lesson the teacher is provided with additional support material in English that they use in conjunction with the Sotho material - our second intervention.

By observing and analysing what happens in the classroom in all three instances, the researcher is able to test the hypothesis and to establish what changes, if any, changes in the medium of the text and the type of texts which teachers use in preparation increases the teachers' effectiveness in communicating new knowledge and skills.

1.1 Ethnographic approach

The research was conducted by gathering data from primary sources viz. principals, teachers, learners, through observation of interactions in the classroom and through interviews and questionnaires in order to obtain as full an understanding as possible.

In order to record behaviour in the classroom in a natural and unobtrusive way, we used an ethnographic approach in which we became participant-observers. We chose this approach because we feel that qualitative data collection is more conducive to an understanding of the problem at hand than a quantitative approach would be. Our research is thus descriptive-illuminative rather than statistical. We thus follow a trend in research about which McKernan (1991:14) says there has been, '...an explosion of interest in qualitative field methodology - all moving away from strict measurement, prediction and control and towards increased description, narration and explanation rooted in understanding as the principal concerns of investigators'. The result of this approach is that we have spent 38 hours in eight different schools observing and recording data, as well as unmeasured time spent in informal discussion with teachers. This has enabled us to gauge whether the use of Sotho alone or a combination of Sotho and English would impact on teaching practice. It has also enabled us to gain an understanding of how teachers prepare for and present lessons, as well as being able to record how the pupils respond in class and to examine the types of exercises and notes that are given. It has also allowed us to document how language is used in great detail with regard to what language is used for what kinds of tasks and how different actors in the classroom setting switch codes.

1.1.1 The participant observation research model

We participated in a series of lessons as observers. By participating we were able to get a feel of the classroom which aided our comprehension of pupil-teacher interaction. As McKernan (1996:63) points out, 'the benefits of participant observation are in terms of collecting authentic accounts and verification of ideas through empirical observation. Our observations consisted of attending three

lessons given by each teacher taking part in the project. During this time, not only were the lessons recorded onto audio-tape, but notes were made of non-verbal behaviours of teachers and pupils and all notes and diagrams referred to during the lesson. After each lesson, feedback was given to teachers by means of the classroom observation schedule. (Schedule 3)

1.1.2 Active research model

There is an element of action research in the study in that teachers were actively involved, being required to comment on the materials which they used, the lessons which they gave and how they used different languages in the classroom. Thus teachers were asked to take a step backwards from their normal practice and to try to view it analytically in order to act on it and improve it.

Through a pre-classroom visit workshop, discussions were held with teachers about the nature of the investigation and background research to its formulation. Teachers were asked to assess both the materials that they use and their own lessons. To this end, teachers were asked to complete questionnaires both before and after the classroom observations took place. Findings of the report will also be presented to the teachers so as to enable them to comment on our conclusions.

1.1.3 Polling teachers' opinions

Finally our research also attempts to elicit opinions from teachers so as to use their perceptions as the basis for future policy decisions. Macdonald calls for this in her report, *School Based Learning Experiences* where she says, 'Such an opportunity (for curriculum development) would be most meaningfully created in a genuine transaction between subject specialists, cognitive developers, method specialists, curriculum developers and experienced teachers' (1990 (b): 95).

2. INSTRUMENTS USED TO COLLECT AND ANALYZE DATA

In order to carry out the study, five schedules were drawn up (see Appendix C). These include the following:

2.1 Schedule One - School profile

The aim of this schedule was used to establish the context in which teaching was taking place. This it covered aspects such as:-

- ? number of pupils
- ? place of employment and levels of unemployment amongst parents
- ? number of classes pupils per class
- ? language profile
- ? subject organisation
- ? availability of resource for teachers and pupils
- ? levels and systems of management
- ? principals' assessment of the strengths and weaknesses of their schools

2.2 Schedule Two - Teacher profiles

The aims of this schedule was to establish:

- ? level of qualification
- ? levels of support through INSET programmes
- ? how teachers went about their lesson preparation
- ? what teaching resources teachers had access to
- ? teachers' classroom language policies
- ? teachers' understanding of teaching and learning and how this affected their practice in the classroom
- ? pupil assessment
- ? attitudes to the teaching of Geography/Human and Social Sciences
- ? resources available for pupils' use in the classroom
- ? classroom management and organisation
- ? teachers' attitudes to the implementation of Curriculum 2005

2.3 Schedule Three - Classroom observation schedule

The classroom observation schedules provided an outline for teachers so that they knew what aspects of their teaching were being observed. The observation schedules were drawn up to be as broad as possible so as not to affect the teachers' styles but rather to allow researchers to assess all teachers' lessons similarly. The classroom observation schedules focussed on the following:

- Introduction of the lesson

- ? Presentation of new information/skill
- ? Resources used in the classroom during the lesson
- ? Organisation of the class
- ? Language used in the classroom
- ? Consolidation of the new work taught
- ? Marking of pupils' work

2.4 Schedule Four - Feedback on using Sotho materials for preparation

This schedule was given to the teachers after they had presented their lessons, using only Sotho materials as their source for preparation in the second phase of the study. This schedule included questions that covered things such as:-

- ? Medium of instruction during the class and assessment thereof
- ? Assessment of the Sotho material both in terms of language and content
- ? Teachers' assessment of the lesson
- ? Teachers' assessment of the use of Sotho materials

2.5 Schedule Five - Teacher assessment of materials used

In this schedule we hoped to elicit teachers' assessment of the materials they had used during the study from phase one to phase three. Thus teachers were asked to comment on both the strengths and weaknesses of the texts which they had used in all three phases. They were asked to fill in a wish list of what resources they would like, what language they would like the materials to be in and what language they would like to teach in. Teachers were asked to supply reasons for all their choices.

2.6 Schedule Six - Classroom presentation analysis schedule

The classroom presentation analysis schedule will be used as the basis for the analysis of lessons given. In the classroom observation schedule (Schedule 3), we made explicit what we feel constitutes sound approaches to teaching. The classroom presentation analysis schedule, (Schedule 6) is a refinement of the observation schedule which we will use for analysis of the content, interactions and activities of the lesson. The classroom presentation analysis schedule thus provides a measure across all teachers participating in the project, based on the transcripts of all lessons presented during the observation period.

2.6.1 Introduction to the lesson

Section One of Schedule 6 focuses on what we consider essentials in the introduction of a lesson. Question 1.1 - 1.2 monitor whether the teacher makes explicit the outcomes of the lesson. By making explicit the aims of the lesson, the teacher is reducing ambiguities and not forcing pupils to guess on their own, what the teachers' intentions might be. It also enables pupils to monitor their own progress.

Questions 1.3 - 1.6 relate to establishing links with prior knowledge, both spontaneous and instructed are also contained in this section.

2.6.2 Presentation of new work

Having established the knowledge base or structures of the pupils, the teacher should then move onto to changing them through the introduction of new concepts or skills. Section 2 provides a wide range of different approaches to the presentation of new work including more traditional types of presentation, viz. lecture style, chalk and talk, through discovery methods using games and simulations.

2.6.3 Establishing teachers' ability to interact meaningfully with texts

A detailed analysis will be made, comparing what the teacher presents in class with the source of the information. Thus resource texts will be summarised and compared with the actual content for skills which the teacher presents. Note will be made of additional information which the teacher may incorporate, factual errors and omissions. See Section 3.

2.6.4 Use of teaching and learning aids

This section looks at what sorts of aids the teacher produces and uses and monitors whether teachers are able to move away from the teacher using aids to aids with which pupils can meaningfully interact.

2.6.5 Classroom management

Section Five examines classroom organisation and whether the teacher is able to move away from a teacher-dominated style of teaching to a level of organisation in which the pupils are... playing a more active, social role in their own learning process, through the use of paired or group work.

2.6.6 Consolidation of new work

Section Six focuses on consolidation of the new work presented during the lesson. Is consolidation undertaken during the lesson and what form does it take? Are children given time to practise or apply what they have learnt? Are the set tasks data recall type tasks or do they make higher cognitive demands on children such as applying new information or skills in a similar but different situation/ Do pupils have to make predictions using newly gained information? It also allows us to examine whether the teacher establishes links with other areas of the curriculum.

2.6.7 Assessment

Section Seven covers assessment. We acknowledge that not every lesson or every piece of writing is used for assessment but felt that this section should be included so as to enable both the teachers and researchers to bear it in mind. Assessment of the pupils would be similar to that of the consolidation section - are children simply required to recall facts or are they asked to apply them in some way? What kind of feedback do children get – does it encourage enquiry and curiosity and build children's confidence? Is it critical and reinforcing of uncertainty and/or under performance? Are explanations clear?

2.6.8 Use of language

Section Eight allows us to examine how language is used in the classroom and to what extent language inhibits or promotes learning.

2.6.9 Analysis of interactions

This section aims to analyse the types of questions which are asked in the classroom in order to establish the types of demands that are being made on the pupils; By documenting the responses to the questions, we will also be able to establish to what extent, pupils are participating and at what level they are participating in class - are they simply being asked to name things or repeat previously given information without relating it to their knowledge structures or are they having

to engage with the teacher and the new work at a deeper level which would demand that their own knowledge structures would-be drawn upon and altered?

2.7 Schedule 7 - Phase Comparison Schedule

Finally, we have included a comparison schedule to facilitate the summarising of the information contained in Schedule 6 and to help us establish whether there are any patterns of change evident in the lessons which we have observed.

3. RESEARCH ASSISTANCE

The necessity to move the project away from Johannesburg affected our ability to work with research assistants. Initially we had hoped to work with students who had registered at the University of the Witwatersrand for the Geography Methodology course, which is part of the Higher Diploma in Education or Bachelor of Arts - Education courses. Uncertainty about where the research was to take place while we waited for the Gauteng Department of Education and the Free State education department meant that when permission was finally given for us to working the Free State, it was too late to organise the students as they had already begun the school experience phase of the H.Dip.Ed(PG) course. Also the travel and accommodation necessary contributed to the difficulty in working with research assistants. It was decided that the research leaders would conduct all of the research.

4. TESTING INSTRUMENTS OF MEASUREMENT

As Schedule Three - the classroom observation schedule - was to be our main instrument of analysis we tested it in situ, using it, as we have said above, to make explicit our intentions to the teachers and to give teachers feedback on their lessons. This proved to be very useful as we did not predict the dominant teaching styles which were in use. We also felt that the categories could be re-organised and that an analysis of the types of questions should be included.

The following changes were made:-

- ? Topic, grade and source material were added to the initial information.
- ? Question and answer presentation and lecture style presentation were added to the section on the presentation of new work as these seemed to be the dominant styles of teaching.
- ? a new section was added, detailing specific geography skills and content and the presentation thereof.
- ? It was decided to make the interaction with the resource text into a separate section and to include omissions between text and lesson content.
- ? Resources used for teaching was changed to teaching and learning aids as we felt this was more appropriate and the section was extended to include whether the teacher used pre-prepared aids such as printed maps or whether they produced their own aids and how effective these were as this had been omitted.
- ? Language use in the classroom was extended so as to enable us to examine where language caused an interference in explanation and/or understanding.

- ? We added an extra question in regard to consolidation of new work so as to include whether the teacher referred back to his/her stated outcome for the lesson.
- ? An analysis of the types of questions and responses was included to enable us to examine at what cognitive level the children were being engaged and whether they were able to meet the expectations of the teacher.

We finally renamed the schedule and will use it for analysis of the lesson transcripts.

5. RESEARCH PROGRAMME

Before research in the schools was undertaken, permission was sought from the Free State Education Department and contact established with the regional offices viz. Kroonstad and Sasolburg.

5.1 Initial workshop

The initial workshop covered the background of the study i.e. Langhan's 1993 report and the aims of the study. There was also time for teachers to go over both the teachers' profile (Schedule 2) and the classroom observation schedule (Schedule 3). Time was set aside for general discussion for teachers and researchers to get to know each other. A handout covering the above and including relevant schedules was given out.

The handout included:

- ? A brief outline of the project
- ? A summary of the senior primary Geography syllabus
- ? A list of materials available in Sotho
- ? Time table
- ? Classroom observation schedule
- ? Teacher profile Schedule

Although we would have preferred to run one joint workshop, it proved easier to organise workshops on an area basis. Thus one was run for the farm school teachers, one for the teachers at the Rammulotsi schools, one for the Zamdela teachers and one for the Thumahole teachers.

At the workshop, teachers were asked to choose three topics from the present Geography syllabus on which to prepare and present lessons, using their own resources in the first lesson, provided Sotho materials in the second lessons and provided English and Sotho materials in the third lesson. Arrangements for further meetings and classroom observations were then set up

5.2 Interviews with principals

Scheduled interviews were held with principals in order to establish the context in which the teachers were working and the nature of the school's feeder area. These interviews proved to be very useful as they promoted the principal's interest in and commitment to the project. The principals at the Rammulotsi schools were interviewed during the national strike called by *SADTU* which might have influenced their responses, especially in relation to the stresses and strains at the schools.

5.3 Classroom observations

Teachers were observed teaching three lessons under the three different situations as detailed, above. Photocopies were made of the material that the teachers used as the basis for their preparation. The lessons were recorded and additional field notes taken during the lesson which included notes and diagrams drawn on the board, teaching aids used, as well as tasks given to pupils for completion.

5.4 Informal discussions

Time was spent after each lesson in informal discussion with teachers around the problems that they confronted in preparation and delivery of the lesson. Teachers' opinions regarding the materials used and an assessment of the lesson was sought. Researchers kept a detailed journal where notes from lessons were kept, noting down notes and exercises given to pupils and conversations with teachers recorded after they occurred.

5.5 Feedback to the teachers

Feedback on the lessons was given to the teachers, using the classroom observation as the basis for the feedback. While teachers responded well to positive comments, and discussion around geographic skills which they had difficulty isolating, they became defensive about negative comments, especially those related to factual errors that occurred during the lessons.

5.6 Post-observation questionnaires

Teachers were asked to complete questionnaires after the second and third lessons had been presented in order to assess their opinion of the material that was used, the quality of their lesson and their language usage. The final questionnaire included a wish list in order to encourage teachers to express their opinions as fully as possible.

5.7 Pupils' books

After all three lessons had been observed, photocopies of pupils books were made in order to assess how much pupils had gained during the period which the researchers spent in the schools.

5.8 Collation and analysis of data

Information collected through the various questionnaires has been collated. Information from the school and teacher profiles has been completed. Data consisting of the lesson transcripts, field notes and pupils' books have been analysed, using the classroom presentation analysis schedule.

5.9 Final workshop

A final workshop is to be held where our general findings will be delivered to the teachers to ensure that they gain from the process in which they have taken part.

6. RECORDED DATA

Data was collected from variety of sources so as to provide a broad base from which to conduct the analysis. These are listed below.

6.1 Lesson transcripts

In order to support our participant observation approach, each lesson was recorded. These classroom transcripts have been subjected to detailed analysis in order that an understanding be gained of what was happening during classroom interactions (Brause and Mahyer,1991). An analysis of classroom interactions, contributed towards an understanding of teacher's use of resources, teaching materials, teacher practice, effect and how best to support teachers.

6.2 Field notes

Field notes were kept during the observation periods, recording what happened in the initial workshop and subsequent conversations with teachers. These enabled us to engage with teachers in a less formal way which encouraged teachers to express the opinions on a range of topics related to teaching and learning, texts, language-in-education policies and the imminent implementation of the new curriculum.

6.3 Written samples

Written samples were drawn from a random selection of the learners' books. These served to further enrich our understanding of how much learning was taking place in the classroom in terms of providing a record both of what the pupils have achieved and what resource they are left with, from which to learn, given that the teachers hold that they cannot understand the textbooks.

6.4 Questionnaires

Questionnaires were completed with the principals of the school in order to gain an understanding of the context in which the research was undertaken. Questionnaires were also used for teacher input. The first questionnaire for teachers centered on basic information about teachers and their attitudes to learning, teaching, and language. Later questionnaires requested critical feedback from teachers vis a vis the texts which they had used for their lessons. Teachers were asked to complete the

questionnaires on their own although time was spent discussing the first questionnaire with the teachers at the initial workshop. Examples of the questionnaires are included in Appendix C.

7. SAMPLING

Initially we hoped to do the research in schools both in Gauteng province and the Free State. However due to difficulties in getting permission to work in the Gauteng schools, in spite of schools' expressed interest in the project, in the interests of time, we shifted the whole project to the Free State province. While increasing the logistical difficulties of conducting the research, we feel that by working in the Free State, this report could add to general understanding of education in the country as very little research of this nature has been conducted in the Free State.

We proposed working with four schools but expanded this to eight schools as it was felt that four schools were too few to provide a representative sample. Working with eight schools allowed for such variables as differences in teaching situation, teaching technique and skill. The two farm schools were included to gauge whether different learning and teaching situations existed in these sites and whether the needs of teachers in these schools differed from those in urban schools.

We selected a range of schools in the Free State Province. These included an industrial area Sasolburg; a small tourist town Parys a farming town, Viljoenskroon and two farm schools, one within the Viljoenskroon district and one in the Kroonstad district The Free State Education Department helped us to identify schools within these areas.

Two of the schools, one in Sasolburg and the other in Parys, operated on a platoon system. This situation had developed because there were not enough school buildings in both Sasolburg and Parys to accommodate the township children. Platoon schools operate in the buildings of another school after the host school has finished its morning teaching. Inevitably the platoon schools have shorter days. Both of the platoon schools in this project responded to the shorter school day by shortening the length of the periods to 25 minutes.

7.1 Schools in Rammulotsi, Viljoenskroon

Rammulotsi is a small township, just outside Viljoenskroon, an extremely wealthy farming town. There is a large informal settlement made up of people who have either left the farms or been pushed off them due to increasing mechanisation.

7.1.1 Ntshwanatsatsi Public School

This is a large primary school which has 1238 pupils and 32 teachers. None of the primary schools in Viljoenskroon include Grade Seven. Due to an accommodation crisis in the primary schools, Grade Seven was shifted into the secondary schools. Ntshwanatsatsi is run by a team headed by the principal, Mr Ngcwabi, and includes the deputy principal, and the heads of department.

The majority of parents are unskilled labourers. The biggest employer in the area is Sentrawes which used to be the big farmers' co-operative in the area but which has recently been privatised. The principal estimates that up to 45% of the parents are unemployed. These parents do piece-work on the surrounding farms.

70% of the pupils have Sotho as their home language while the rest of the pupils are either Zulu or Xhosa home language speakers with a high proficiency in Sotho. The language policy at the school is that the junior primary phase is conducted in Sotho while the senior primary phase is conducted in English. The school's parent body voted for this policy by a show of hands at a public meeting. While the principal feels that Maths and Science are the most important subjects, he acknowledges that it is important for children to know about 'South Africa, important places, climate and its effect.'

The school is relatively well resourced in that it has a photocopier, a cyclostyle machine and 4 overhead projectors. However, if teachers wish to make photocopies, they have to pay for them. In terms of reference resources for teachers, the principal said they made their own plans but that most teachers primarily used the textbooks. The school had some geography textbooks for the learners but the principal felt that there were not enough books for all the learners to read.

The only workshops the teachers had attended had been run by the Free State Education Department - there are no other educational support projects operating in the area.

The principal felt that Phase 2 was working well as he had a good balance of teachers. He was also satisfied with the Grade One programme. He felt that the teachers were under a lot of pressure as they were unable to differentiate between the needs of the school and the demands of the union. (This might have been due to the fact that when the interview was conducted, the majority of teachers were taking part in a national strike called by SADTU). In fact the principal expressed feeling a lot of pressure as well, pressure brought on by not being sure that his school was able to implement government policy. He said that he felt caught between the government, the teachers, the parents and the pupils. He said that he saw no way out without additional support from the government, which could help principals to be more effective. The biggest problem at the school was the poverty of the pupils and what the principal saw as a lack of support from parents in terms of sending children to school without jerseys and shoes and food.

The principal wants his school to be comparable with all other schools, to provide quality education but feels that financial problems prevent him from achieving this although the school had come 4th in a school competition run by City Press.

7.1.2 Renyakaletswe Public School

Renyakaletswe is very similar to Ntshwanatsatsi. It is also a large school with 1143 pupils and 29 teachers with an average of 50 pupils per class. The majority of the parents are unskilled labourers, doing seasonal farm work. The principal estimates that 50% of the parents are unemployed.

The home language distribution is very much like that of Ntshwanatsatsi. The parents decided on the school's language policy at a public meeting. Like the principal of Ntshwanatsatsi, the principal of Renyakaletswe saw the Human and Social Sciences as being second in importance to the Natural Sciences. The school has overhead projectors, which the school bought. There are classroom libraries and the children use the public library.

The supervision of teachers in Phase One (Junior Primary) is left to the Phase One HOD while the principal and the Phase Two (Senior Primary) HOD exercise control over teachers in the senior

phase. This entails observing lessons, checking preparation and class-work books and trying to motivate teachers when there is a problem.

This principal also saw the relationship between the teachers and the government as a problem (This interview was also undertaken while the teachers were on strike). He feels that they find it difficult to readjust to work when there has been a confrontation. He feels that the government always ultimately *agrees* with the union. They should therefore try to avoid confrontations with the teachers. The biggest problem that the principal expressed was dealing with conflict between the teachers who belong to different unions and conflict between the sports and entertainment committees.

The biggest problem that the pupils confront is poverty and unemployment, like those at Ntshwanatsatsi. The school tries to help by working with the Welfare department and through food gardens at school. He would like to see the parents more involved in the school.

7.2 The farm schools

7.2.1 Nugget Farm School, Viljoenskroon

This is a very small school - there are 43 pupils and two teachers. Most of the children come from the farm on which the school is situated. There are two classes - one for the junior phase (24 pupils) and one for the senior (19 pupils). The majority of pupils are Sotho primary language speakers a few Zulu and Xhosa speakers. Unlike the Rammulotsi schools, the principal said they received a directive from the education department, saying that the junior phase should be in Sotho while the senior phase should be in English.

All the fathers of the children are employed full-time on the farm while the mothers do seasonal work. For the principal, who is also the senior phase teacher, the Human and Social Sciences are important as 'people need to know about their environment and their history. They need to know who they are.'

The school has few material sources - there are no duplicating facilities - but it does have a globe, maps, a few library books and science kits. Teachers have attended courses run by the IDT for Maths, Science and English. The junior primary teacher has also attended workshops run by the education department on Curriculum 2005 but still feels confused and unsure of what is expected of her in the classroom, according to the principal. The principal has close contact with the junior phase teacher. They discuss problems together and he checks her books.

The principal feels that his life would be easier with more equipment such as a typewriter and a photocopier. But he does not see that this as a possibility since the school community is small and poor. Lack of finances is his biggest problem. However, he says that the school takes part in many satellite activities and is more relaxed than township schools. The biggest problem that his pupils have is that their parents do not have much education. Because of this, they are unable to help the learners with homework.

The principal is very worried about implementing Curriculum 2005 as he says it is a directive from above and he is not sure that he will be ready when the time comes. The principal feels that the

department needs to supply more materials such as paper, charts, an overhead projector and that the quality of the blackboard needs to be improved.

7.2.2 Boschkopje Farm School, Kroonstad

Boschkopje is bigger than Nugget Farm School as it has children from six neighbouring farms. There are 50 pupils-24 in the junior class and 26 in the senior class. The school is run by a husband and wife team - the husband being the principal and senior phase teacher. All the parents are farm workers and a few children live with their retired grandparents.

The organisation of the school is similar to that of Nugget except that the senior class includes Grade Seven, as Boschkopje is part of the Kroonstad circuit, and not Viljoenskroon. The language profile is that same as Nugget but the language policy differs in that they begin to use English as the medium of instruction from Grade One. Parents agreed to this at a meeting where the difficulties of Grade Five pupils, due to their lack of English, were discussed. Although they have decided to start using English as the medium of instruction much earlier than the other schools, the principal is not against the use of Sotho in the classroom. He says, 'It is fine to use Sotho as the pupils understand everything in their own language but teachers must use English as well.'

The principal had a lot to say about the teaching of the human and social sciences. 'These subjects are important because children and teachers must know about different places. They must know about the oceans, gold and diamond mines so that they can do research when they are older. They must know about their grandfathers, how did they get to South Africa, South African and European history.'

Like Nugget, there are no duplicating facilities at Boschkopje but they do have maps, textbooks, library books, Maths and science equipment although there are no reference books for the teachers to use. The teachers at this school have not attended any training workshops other than for the introduction for Curriculum 2005. Although they are husband and wife, the principal checks the other teacher's books every week.

The strength of the school, as the principal sees it, lies in the fact that both he and his wife are committed particularly to the education of farm children. The principal feels that the parents do not support them enough - children come to school dirty, they don't do their homework and are often late because some live far from the school and there is no transport for them. These things normally improve after a meeting with the parents.

Like all the schools, money is a problem. The principal would like the farm owners to deduct money directly from parents' wages. The principal enjoys a good relationship with the farm owner on whose farm the school is situated. He says that the parents who live close to the school help him by looking after the school garden during holidays and that it is by far the best farm school at which he has taught.

7.3 Tumahole schools, Parys

All of the schools in the Parys district were located in urban township contexts. Parys is a small town with very little industry. It serves as a holiday location for surrounding areas as it is on the Vaal River.

7.3.1 Diopelwa Public School

Diopelwa is a relatively new school located in Tumahole, on the outskirts of Parys. The school has 684 pupils and 12 teachers, headed by the principal, Mrs D.G.Baleni. The school opens at 12h00 in the afternoon and closes at 17h00.

Most of the children come from families where both parents are unemployed. The headmistress estimates that 80% of the parents are unemployed. Most of the children in this school come from families located in the, squatter camps situated around Tumahole. Those parents who are employed work as domestic workers in the surrounding area.

A small percentage of the learners speak Xhosa at the school but most speak Sotho as their primary language. The school's language policy is that English is used as the medium of instruction from Grade One onwards. The parent body voted for the policy at a Parent-Teacher Association meeting. The headmistress pointed out that in some cases the lower grade teachers found it easier to teach in Sotho. She said that she allowed this but tried to encourage teachers to follow the policy. She felt that the learners needed to be exposed to as much English at school as possible because the learners had little other opportunity to listen to and speak English at home because most of the parents are illiterate and unable to speak English.

The school is only four years old. As a result the school does not have any resources. The parents had recently bought a photocopier for the school but they did not have a budget to run it for teaching purposes yet. The school has no library or resource materials for the teachers. The teachers use textbooks which they have borrowed from teachers at surrounding schools in the area. The Geography teacher mentioned that the school has a large wall map of Africa and the World.

The headmistress and a senior management team manage the subject teachers. Departmental heads are appointed to manage the various subjects. Meetings are held twice a quarter to monitor progress between the various classes and levels. Subject teachers are appointed to teach subjects according to their qualifications. The headmistress felt that although the human and social science subjects were important, the physical sciences were more important.

According to the headmistress, the school's strongest point is the good relationships that exist amongst the staff. Frustrations include the lack of participation by parents in the school. The headmistress said that this was because most of the parents lived in the informal settlement and were unemployed or absent, working in other areas. This has resulted in poor performance amongst the learners who received no supervision at home. Discipline at the school also suffered as a result. Another problem was the fact that the school had no premises. This had led to a shorter school day and problems with motivation of learners and staff in the late hours of the afternoon.

The headmistress felt unsure about the implementation of Curriculum 2005. She felt that there were certain problems which had to be solved if these were to be solved. Teachers were unprepared and needed more support and the shortage of textbooks would have to be addressed.

7.3.2 Aha Setjhaba Public School

Aha Setjhaba Public School is run by Mrs N.M.A. Dikotsi. This school, also located in Tumahole, Parys, has 1013 pupils and 27 teachers. The school had recently (1995) moved into its own premises. They had been operating as a platoon school since 1992. The school buildings were built with funds raised by the Independent Development Trust. The style of architecture and materials used are different from typical township schools. The result is a friendlier atmosphere and a less institutional feel about the school.

The school is in an older and more established part of the township. The headmistress said that about 60% of the parents are unemployed. Those that worked do so as domestic workers in Parys.

There are four Grade One and Two classes and three classes for Grades Three through to Seven. There are approximately 42 pupils per class. The classes are not streamed. All of the learners are Sotho first language speakers. All of the teachers speak Sotho but not all of them speak it as a home language. The school's language policy is to teach in Sotho from Grade One to Grade Three and then to switch to English as the medium of instruction. The parents decided upon the policy at a meeting. The headmistress tried to encourage the teachers to use as little Sotho as possible in the second phase. She said that the subject heads monitored language use. She did, however, realize that teachers found it useful to teach difficult concepts in Sotho.

The headmistress felt that Human and Social Sciences were important because the learners needed to learn about their immediate environments and have a sense of where they come from. She felt that excursions were an important part of this subject because learners could learn important information about aspects of society which could not be learnt in the classroom such as visits to the water purification works and museums.

The school has a number of resources for the use of teachers. They have a photocopier, overhead projectors, globes, maps and the teachers have at least one set of textbooks. Most of the learners seemed to have textbooks to use for class and home study. The school also has a library.

The headmistress uses a system of subject committees to manage the school. Meetings are held twice a quarter. Subject heads are responsible for the supervision of the teachers and reports are submitted to the department as stipulated by the department. Subjects are allocated to teachers according to their qualifications and their interests.

The school's strongest point, according to the headmistress, is a conscientious staff who is committed to teaching and the school. There is also a good working relationship with the parents who support the school financially (the photocopier was bought by the parents). Problems that the school faces are a lack of support from the department and the need for more equipment such as audio-visual material. The staff feels that the department needs to support teachers more if they are to implement Curriculum 2005 effectively. They said that they had implemented the Grade One curriculum successfully but that much more INSET would be needed to implement it in the higher grades. The school has been burgled regularly and they had recently lost a lot of equipment as the

result of arson. Problems concerning the learners include hunger and a lack of adequate transport to and from school.

7.4 Schools in the Sasolburg area

Both schools are in Zamdela, the township of Sasolburg, which is dominated by the chemical industry. Although this means that there are high levels of pollution, the factories provide greater employment opportunities than the other areas in which we have conducted our research.

7.4.1 Lehutso Primary School

Lehutso is a platoon school that operates in the afternoon. The school has 1064 learners and a staff of 26 teachers. The headmaster estimates that about 40 % of the parents are unemployed. The reason for the lower level of employment is probably due to the greater availability of work because of the factories in the area. Parents who are employed tend to work as labourers, domestic workers and artisans.

All grades from One through to Seven are offered. There are four Grade One, Two and Three classes. There are two classes for Grades Four through to Seven. There is no streaming of classes at the school. One additional class is offered which is a combined Grade Two and Three class that was formed for Pedi speakers. There are 53 learners per class on average.

Sotho and Pedi are the predominant primary languages of the learners. The teachers' primary languages include Sotho, Pedi and Zulu. Primary language instruction is offered in the junior primary phase and the senior primary phase is in English. Although the headmaster said that he would tolerate the use of any language in the classroom he discouraged the use of primary language in the senior primary phase because the learners had to use English frequently if they were to become proficient at it. The governing body had decided upon the policy.

The school has a photocopier and a roneo machine. The parent body raised the funds for this equipment. They have not been able to establish a library because they do not have their own premises. The district office has also supplied the Humanities department with a set of wall maps. The school does have a set of textbooks for the learners but they are dated and the teachers say that they need new textbooks for the new curriculum.

The headmaster felt that the school was not ready to implement Curriculum 2005 because they do not have enough resource material. Although the teachers at the school had attended courses on outcomes-based education that were offered by the education department, he felt that the pace of implementation had been too rapid and that schools need more time to prepare.

Strengths of the school, as listed by the headmaster include: a supportive parent body, an effective decision-making system at the school and teachers with a good attitude and who are willing to hey instructions. Most of the problems concern the platoon system. Often teachers need to attend courses or meetings in the afternoon, taking them out of the classroom. The school also has no senior management because the department has not appointed a deputy head or departmental heads. Finally, the parents are unable to help the learners at home because they have not had an education themselves.

7.4.2 Bofula Tshepe Primary School

Bofula Tshepe is a large day school with 1308 learners in the school and a staff of 34. The headmaster, Mr. Zwane, estimates that 50% of the parent body are unemployed. The school's feeder area includes an informal settlement located on the outskirts of Zamdela. Parents who are employed, work as labourers and domestic workers.

The primary language of the learners is Sotho and most of the teachers are also Sotho primary language speakers. The school's language policy is to begin instruction in English from Grade One. The decision was made by the parents, at a school governing body meeting.

The headmaster said that he allowed teachers to use Sotho to aid explanation of difficult concepts and understanding but he felt that it was important to promote fluency in English amongst the learners.

There are four classes in each grade at the school and there is no streaming of pupils at all. The school offers all junior and senior primary subjects. The head feels that the human and social sciences are important and he saw great potential in the integrated nature of the new learning area.

The school has managed to accumulate a number of resources from the department and through donations from firms and parents. They have a large photocopier, charts, globes and maps. There is no library at the school but the headmaster has approached industries in the area to raise funds and he hopes that they will be able to build a library early next year. The school has a limited number of textbooks and atlases for the learners.

Teachers at the school have attended workshops and INSET programmes run by the education department but none of the courses had dealt with the human and social sciences learning area. The headmaster said that he ran afternoon workshops for the staff in which he developed his staff's management skills and dealt with issues such as conflict management. The teachers said that these were positive experiences and promoted a positive atmosphere in the school. The headmaster said that most of the management at the school was done by the departmental heads.

The headmaster felt that there were few problems at the school. He said that he would like to open a remedial class for learners who are struggling to cope. He felt that these problems were the result of learners entering school too early or being promoted regardless of their competence. The school's feeder area is poor and many of the learners arrived at school hungry and as a result their performance in the class is poor. The school had also recently experienced problems with sexual harassment of learners. The staff dealt with this by keeping stricter control of the learners, particularly pupils who were called home during school hours.

Generally the management and staff of the school feel optimistic about Curriculum 2005 and believe that with adequate support from the education department, they will be able to implement the new learning areas successfully.

PART 4

DESCRIPTION OF GEOGRAPHY KNOWLEDGE

1. The nature of Geography

Geographical knowledge is popularly considered to be an exploration of the relationship between the earth, its resources and its peoples. Educationally this is usually translated into the study of places, spaces and environments (Wiegand, 1993). A study of geography involves an understanding of:-

- ? processes and phenomena where location is used as an organizing concept
 - ? real-world relationships and dependencies among phenomena and processes that give places their character
 - ? relationships among places
 - ? scale in space and time within these relationships
- (National Research Council, 1997:3).

In order to develop geographical understanding, a number of skills and techniques, specific to the discipline of Geography, have been developed. These include techniques for observation such as remote sensing and field observation, as well as methods of analysis and display of geographic data including; cartography, visualisation, spatial statistic and geographical information systems (National Research Council, 1997). The map remains one of the key tools available to a geographer in spatial analysis of places, phenomena and the relationships between them.

2. Aims of Geography education

Binns (1996) lists the following aims of geographical education. These are drawn from the British Geography National Curriculum Working Group's Interim Report. Geographical education should:-

- ? stimulate pupils' interest in their surroundings and in the variety of physical and human conditions on the earth's surface;
- ? foster their sense of wonder at the beauty of the world around them;
- ? help them to develop an informed concern about the quality of the environment and the future of the human habitat; and thereby
- ? enhance their sense of responsibility for the care of the earth and its peoples

Traditionally Geography has played an important role in developing a sense of geographical literacy in learners. This function of Geography education has recently been emphasised as results from surveys conducted amongst citizens in a number of countries, which have downplayed that function of geography education, have shown dramatic deficiencies in people's knowledge of the location of specific places and issues associated with places (National Research Council, 1997). In a world in which there is an increasing trend towards globalisation,

it is critical that learners develop an adequate knowledge of the location of places and issues which are of critical importance to people in those places.

The special contributions of Geography to a child's education include:-

- ? Graphicacy - understanding and communicating spatial information through maps and other visual means of representing information.
- ? World knowledge - through the skills, knowledge and attitudes acquired through geographical education, pupils are helped to make sense of the world and current events.
- ? International understanding - Geography develops an understanding of different cultures, locally and internationally.
- ? Environmental awareness - Geography encourages learners to understand their own environment and how humans interact with human and physical resources. (After Mills, 1988:21)

2.1 Current South African Geography syllabus

South African school Geography is currently guided by the Interim Syllabus for Geography, Standards 2 to 4. This document is the product of a revision process that intended to remove bias, racism, and inappropriate content until such time that the syllabus could be completely rewritten. The document outlines the nature of Geography as a subject that has many areas of overlap with other subjects (DNE, 1995). Four major traditions in geography are identified. These are:-

- ? Human-land relationships
- ? The spatial perspectives
- ? The regional viewpoints
- ? The earth-science component

Teachers are encouraged to maintain a balance between physical and human Geography, as well as practical and theoretical aspects of the subject (DNE, 1995). Outlined aims include the development of intellectual skills, adjusting to a changing society, moral and emotional development, as well as technological and skill development to prepare the pupils (sic) for the world of work. Objectives to be achieved in geographical education include knowledge acquisition, skills, perception and appraisal. Skills such as oracy and literacy, numeracy, graphicacy, interpretation of different forms of visual information and fieldwork techniques are identified as being important. Other areas of importance include the ability to identify relationships between human and natural environments, patterns and interactions in space, processes and variety across the world (DNE, 1995). The syllabus recognises the need to develop positive attitudes and values towards people and the environment.

The South African syllabus provides a breakdown of the content that teachers are to cover in each year but it does not provide a detailed description of skills and concepts that should be developed each year in order for the learner to cope with increasingly complex and voluminous content. There are numerous British and American texts which deal with the development of

geographic thought in young learners and we will use these to outline contemporary thought on geographical education at junior school level. (See Appendix A for a list of syllabus topics.)

2.2 Current ideas on Geography education in primary schools

Apart from general intellectual and communicative skills, which are common to any subject in the curriculum, Geography at primary school level should develop a number of skills and concepts specific to the discipline. The main focus of Geography in the primary school curriculum should be to help learners to gain an understanding of their local environments. This should include physical affects such as the weather, relief and phenomena or processes that influence these. A study of human elements of the environment should include a study of local people, where they work, transport systems and resources available for human exploitation in the area. A study of more distant places should place an emphasis on the variety in landscapes, climate inequalities in wealth and how people cope with these differences (Bednarz et al, 1994; Wiegand, 1993; Mills, 1988).

2.2.1 Concept development

Concept development should include the recognition and classification of objects on the earth's surface. Geography teachers should also develop a deep sense of the relationships between objects on the earth's surface. Teaching about places is an important element of this. Wiegand (1993) says that this means that teachers should sensitize learners to the world in which they live. Although imparting facts is an important aspect of this, just as important is discussion about feelings and attitudes. 'In order to understand places, you must be able to think and feel yourself into them ... The understanding of place is inextricably bound up with a consideration of children's attitude to places and to people.' (Wiegand, 1993). Concepts concerning location, such as direction and distance, are critical for the development of a geographical understanding.

2.2.2 Skills development

Skill development in Geography at a primary level involves working with maps and collecting and interpreting geographical information. Mapwork skill competencies include:

- ? Finding places on maps using co-ordinates (letter co-ordinates in the lowest levels up to six-figure co-ordinates in the higher levels)
- ? Understand direction (first left and right then on to the points of the compass)
- ? Orientates a map and locate features on it
- ? Interpret symbols on the map
- ? Appreciate that map making is a process of selecting some information and excluding other
- ? Read and interpret scale
- ? Draw sketch maps

(Wiegand, 1993: 15).

In the South African syllabus, learners at the Grade Four level are expected to have a knowledge of the four main directions, draw a plan of the class and local environments up to the level of village or suburb and understand and use a simple map of the provinces. Grade Fives should be

able to work with eight points of the compass and a map of the country. Grade Six learners should be able to determine direction and read maps of the world. Grade Seven learners should be able to determine direction using a compass, determine position in terms of hemispheres and latitude and understand the concept of scale and distance.

Wiegand (1993) says that when children read maps, four processes are involved. They must detect symbols. Good teaching would ensure that the symbols are clear enough for the learners to see i.e. there should be good contrast between the symbol and the rest of the map. Symbols on maps on classroom walls may be inappropriate because the learners may not be able to see the symbols clearly. Next, learners need to discriminate between symbols and distinguish between details such as size and colour. In order to identify map symbols, learners must be provided with adequate examples in the form of pictures, videotapes or real life. The final phase involves interpreting the information. Interpretation requires that the learners understand that symbols are selective representations of reality. Obviously in order to achieve this, teachers need should understand how this type of learning takes place and they should have appropriate resources for use in the classroom.

PART 5

MATERIALS USED IN THE PROGRAMME

The project focuses on materials used by teachers for preparation therefore the input of the project has been at the level of teaching materials. One of the objectives of the project is to gauge what kind of learning materials the teachers develop from the materials that they have at hand as part of their methodological style. Thus we will monitor changes in the materials which they use and produce for their learners.

1. Materials used during Phase One

During this phase, teachers were encouraged to use the materials that they normally use so that we could get some indication of what usually happened in their classrooms. Most teachers told us that they used the textbook exclusively as the basis for their preparation. However a few teachers in Zamdela and Tumahole said that they used material from libraries to prepare and one teacher, from Bofula Tshepe, said that she used magazines to prepare. Some teachers also mentioned atlases as a resource.

In the two farm schools and Ntshwanatsatsi, the teachers used *Active Geography*. Renyakaletswe teachers preferred to use *Modern Geography for All* rather than *Active Geography* which had been supplied by the department. They preferred to use this book because the teachers felt that it had more information. The teachers said that *Active Geography* is out of date and needs to be replaced. They preferred to use *Modern Geography* even though there are no classroom sets of this book - there is only one book per grade, for the teachers' use.

The teachers from Aha Setjhaba said that the school had copies of *Geography to the Point*, which they used but that they had also bought additional copies of *Active Geography* that they used to prepare lessons. Teachers from Diopelwa used *Active Geography* in the classroom and they also used it to prepare their lessons. The teachers from Lehutso had access to three textbooks for preparation - *Active Geography*, *Geography to the Point* and *Modern Geography*. Bofula Tshepe had copies of *Geographically Yours* for the learners and teachers seemed to have access to a mixture of texts, mentioned above, which they had bought or collected over the years.

Not all of the publishers supply texts for Grade Four. The farm school teachers and the teacher from one of the township schools used the Grade Five book as their reference source while another teacher either relied on what she knew or collected information wherever she could find it.

Lesson topics

Textbook used

Neighbours - Lesotho

Geography to the point
Active Geography - Std 4
(p 30 - 32)

The relief of South Africa

Active Geography - Std 3
(p 15 - 17)

Transport*	<i>Modern Geography for all - Std 3</i> (p 65 - 72) Ho eta naheng (In <i>Bala O Ithute</i>)
Climate	<i>Modern Geography for all - Std 4</i> (p 21 - 24)
Provinces	Metropolitan Life poster of provinces
Seasons	<i>Active Geography - Std 4</i> (p 10 - 14)
Rotation and revolution	<i>Active Geography - Std 4 (p 7 - 8)</i>
Products of South Africa	<i>Active Geography - Std 3 (p 25 - 28)</i>
Fishing in South Africa	<i>Active Geography - Std 2 (p 48 - 54)</i>
Transport (tunnels)	<i>Active Geography - Std 5 (p 57 -59)</i>
Provinces of South Africa	<i>Active Geography - Std 2 (p 20 - 22)</i>
Transport	<i>Active Geography - Std 5 (p 54 - 56)</i>
Cattle Farming	<i>Active Geography-Std 3 (p 27-29)</i>
Transport	<i>Active Geography- Std 5 (p 57)</i>
Important issues in Africa	<i>Geography to the Point - Std 4 (p 32 - 35)</i>

* This teacher seemed to misunderstand and jumped the gun by using Sotho materials in this phase of the project although she did not use them in the last phase when it was requested.

2. Materials used during Phase Two

In this section of the study, teachers were asked to choose a text that related to the syllabus from a selection of material in Sotho. Each participating school was supplied with the selected material. (See Appendix B) The topics, which the teachers chose for this phase of the project, were as follows:-

<u>Lesson topics</u>	<u>Name of article</u>
Provinces of South Africa	Ho etela ditulo tse ding
Climate	Boemo le lehodimo kapa delaemete
Fishing	Ho eta metsing
South Africa's Neighbours	Se etshalang letsatsi le letsatsi ho Thami, mokganni wa lori
Maize *	
Temperature	Motjheso le mohatsela
Transport	Ho eta naheng
Provinces of South Africa	The Northern Province - sebaka se makatsang
Resources*	Supplementary material on syllabus-Std 5
Sugar Farming in South Africa*	
Provinces of South Africa	Mpumalanga - entle
Direction	Ho fumana tsela Telecommunication

- * The teachers who chose maize, resources and sugar farming in South Africa said that they had misunderstood the aim of the project and continued throughout not to co-operate in terms of using the materials provided.

3. Materials used during Phase Three

Teachers were to use Sotho again but this time with the supplementary material in English. The English material used to support the Sotho material was chosen in two different ways. In the Zamdela and Thumahole schools teachers were presented with new textbooks and asked to choose those that they thought were the most useful. In the Viljoenskroon and farm schools, different support material, not necessarily textbooks were used. All the material that was used represented more up-to-date selections of text than those with which the teachers were currently working.

<u>Lesson topics</u>	<u>Texts used</u>
Western Cape	Western Cape - lebatowa la boithabiso <i>Explore your province</i>
South Africa's provinces	Ho etela ditulo tse ding <i>Explore your province</i>
Forestry	<i>Living Geography Std 2*</i>
Lesotho	World Fact Files - Southern Africa*
Mining	<i>Explore your province*</i>
Transport	<i>Living Geography - Std 5 (p 45 - 46)*</i>
New provinces	<i>Living Geography - Std 2 (p 20)*</i>
The World	<i>Living Geography - Std 5 (p 12-13)*</i>
Trade in Africa	<i>Living Geography - Std 5 (p 43 - 45)*</i>
Urban and Rural issues	<i>Active Geography - Std 4 (p 52 - 53)*</i>

*Teachers chose not to use the provided Sotho material in these lessons

PART 6

CRITERIA USED TO MEASURE CHANGES IN PERFORMANCE

1. Teacher performance

1.1. Present situation in schools

Previous research (Macdonald, 1990; Langan, 1993) has shown that teachers are reliant on a 'chalk and talk', teacher-centred method of teaching. As suggested by both researchers, teachers tend to resort to this kind of defensive teaching when they feel that they do not have total control over what is happening in the classroom. Their feelings of inadequacy may stem from any number of problems. Langan's research pointed to a lack of background in the subject and an inability to process poorly written texts adequately so that teachers were unsure of what they were teaching. Macdonald's research cites teachers' feelings of inadequacy caused by the enormous problems their pupils confronted, dealing with abstract ideas and texts in English which they could not fully comprehend, a situation exacerbated by teachers' feelings of inadequacy in using English as a medium of instruction. The problems which teachers confronted were made worse by the disproportionate pupil/teacher ratio and a lack of support materials for teaching and learning aids.

It seems that neither researcher investigated directly how teachers perceived learning as happening. Macdonald refers to informal comments made, '...one of them (the teachers) said to us that rote learning actually helps the child to understand; another said that drilling is an effective method of learning. The reasons she gave for this were (for Std 3 pupils) that since some children can't read, "drilling is better", and that some of the children mix English and Afrikaans.' (1990 (b): 30). One of Langan's conclusions refers to teachers' methodologies, which he identifies as one of the main weaknesses of the teachers. Langan states, 'Methodological unsoundness revealed in; teaching unintegrated facts by rote, no learning by discovery; and repeated testing that reinforces memorisation and regurgitation.' (1993:140)

1.2 Meaningful learning

In order for change to occur in the classroom, it is important that we elucidate our position vis-a-vis what we feel constitutes meaningful learning. In order to do this, we draw on explanations of learning drawn from both Piaget and Vygotsky. Piaget proposes that the basis of knowledge is operational structures and that, in order to understand learning or development, we must understand the '....formation, elaboration, and the functioning of these structures.' (1964:9). Thus Piaget describes learning as follows, 'It is that in the act of knowing, the subject is active, and consequently, faced with an external disturbance, he will react in order to compensate and consequently he will tend towards equilibrium. Equilibrium defined by active compensation, leads to reversibility. Operational reversibility is a model of an equilibrated system where a

transformation in one direction is compensated by a transformation in the other direction. Equilibration is an active process. It is a process of self-regulation (1964:14).

While Vygotsky had some serious differences with Piaget, his explanation of learning or conceptual development is not dissimilar. Vygotsky describes learning thus, 'To us it seems obvious that a concept can only become subject to consciousness and deliberate control when it is part of a system. If consciousness means generalisation, generalisation in turn means the formation of a superordinate concept that includes the given concept as, a particular case. A superordinate concept implies the existence of subordinate concepts, and it also presupposes a hierarchy of concepts of different levels of generality (1962:92). He elaborates on this with special regard to school learning by saying, 'In the scientific concepts that the child acquires in school, the relationship to an object is mediated from the start by some other concept. Thus the very notion of scientific concept implies a certain position in relation to other concepts i.e. a place within a system of concepts (1996:93).

Thus, for Piaget, learning is something, which occurs through activity, with the learner playing a central role in the changes on operational structures, which occur, brought about by a 'disturbance'. While Piaget was somewhat dismissive about school learning, let us, for the purposes of this study, accept that teachers must be responsible for creating this 'disturbance' in their classrooms and allowing children to learn by actively constructing their own knowledge. Like Piaget, Vygotsky explains learning as a complex, interconnected process. If we accept this explanation of learning, by implication, good teaching is teaching that explicitly makes connections between children's experience of the world and knowledge, which they might have gained at school. Good teaching also presents new ideas, knowledge or concepts in such a way as to make easy the formation of connections, moving from simple to more complex, in an organised and systematic way. For true learning '...is more than the acquisition of the ability to think, it is the acquisition of many specialised abilities for thinking about a variety of things the learning process can never be reduced simply to the formation of skills but embodies an intellectual order that makes it possible to transfer general principles discovered in solving one. task to a variety of other tasks (Vygotsky, 1979:83).

1.3 The role of teaching in learning

Vygotsky's (1962) major disagreement with Piaget revolved around the role of formal instruction. For Piaget, children learnt more by themselves, through self-discovery for. Vygotsky, formal education played a vital role in children's cognitive development. Thus he had a lot to say on the issue, viz. 'Instruction is one of the principal sources of the school child's concepts and is also a powerful force in directing their evolution; it determines the fate of his total mental development... When we teach important systematic knowledge to the child, we teach him many things he cannot directly see or experience.' (1962:85,86).

Vygotsky maintains that it is very important that one starts with what the child knows or what the child is capable of doing on his/her own. However, that s simply the starting point; 'Learning which is oriented toward developmental levels which have already been reached is

ineffective from the viewpoint of a child's overall development "good learning" is that which is in advance of development (1979:91). This idea of being in advance of development Vygotsky developed further into the zone of proximal development (ZPD). Thus it is essential that teachers are able to pitch whatever it is that they want to teach at the right level, beyond what the child can do on his/her own but within range of what the child can do with adult help.

For Vygotsky, drilling has no place in the classr9.9m.11e says, 'A concept is more than the sum of certain associative bonds formed by memory, more than a mere mental habit; it is a complex and genuine act of thought that cannot be taught by drilling ...'(1962:82). His sentiments are echoed by James Britton who says, 'As teachers we are responsible for ... the classroom. It is clear we have a choice: we can operate so as to make that as rich an interactive learning community as we can, or we may continue to treat it as a captive audience for whatever instruction we choose to offer.' (1987:198).

According to Wood (1991) all learning in a classroom is contrived and social relations unequal. The teacher decides what to teach the children are compliant. This situation can cause problems for children, as they have to discover what the intentions of the teacher are. Their tasks are made far easier, however, if the teacher's intention is made explicit.

Building on the idea of the ZPD, Wood outlines more precisely what is meant by this concept. He sees children, as being allowed to actively engage what he calls task-relevant goals with the assistance of their teachers who should be providing whatever scaffolding might be necessary. He explains what he means by scaffolding. 'Given children's propensity to attend to a limited range of features or problematic situations and, perhaps their immature strategies of deliberate memorisation, a teacher will often have to scaffold their immediate actions-. They may, for example, highlight crucial features of the task situation that have been ignored or forgotten Scaffolding functions effectively support and augment learners' limited cognitive resources, enabling them to concentrate upon and master manageable aspects of the task. With experience, such elements of the task become familiar and the child is able to consider further related task elements.' (1991:108).

1.4 A model of 'good' teaching

To sum up, if we accept Piaget's and Vygotsky's description of learning or cognitive development, good teaching - the type of teaching we would like to see, should the Sotho material have the desired effect, would include the following elements:-

- ? The teacher should always make clear the intention of the lesson and tasks and other which go to make up the lesson
- ? Teachers will establish what their children already know, both by referring to rough work which they have previously covered in class and knowledge which they have gained through their own experience of the world.

- ? Teachers will relate what they are teaching to other parts of the school curriculum, which may be relevant.
- ? The teacher should plan and provide the opportunity for pupils to learn, i.e. Piaget's disturbance, and operating within Vygotsky's ZPD.
- ? New ideas or concepts should be presented within the system to which they belong and the stages of their introduction should be hierarchical, moving from simple to more complex.
- ? Pupils should be given opportunities to actively engage with whatever it is that they have learnt, be the activity a discussion with peers, independent application or paired practice

Conversely, we would like to see teachers break away from behaviours, which are associated with the traditional classroom, such as:-

- ? launching into the lesson with no introduction
- ? relying on a lecture-style input in which the teacher predominates while the children listen
- ? teacher giving notes which the children copy down without any attempt being made to establish whether the children understand the notes.
- ? children being required to repeat what the teacher deems as important points in rote-rhythm choruses
- ? exercises or tasks being given, which require data, recall type answers only.

However, one must remember not to be too hard on teachers. Wood calls for sympathy for teachers saying, 'Effective teaching is as difficult as the learning it seeks to promote.' (1991:105).

2. Pupil performance

While the aim of this project is to focus primarily on what teachers do in the classroom, mention must be made of the effect we hope that changes in teacher behaviour would have on pupils. Drawing once again on the research of Macdonald (1990) and Langan (1993), we expect to find pupils fulfilling a passive and acquiescent role in the classroom, repeating what is required of them by the teachers, answering questions which require one word answers and taking down notes which might or might not make sense to them.

2.1 Pupil behaviour in class

We hope to see pupils shifting from the traditional, passive role, which has been documented, to a more active role in the classroom. This would entail pupils grappling with more difficult questions, which require explanation, prediction, empathy, problem-solving or synthesis. We would thus like to see pupils being encouraged to ask questions stemming from curiosity and, calling for clarification.

We would also like to see pupils being given the opportunity to establish links between what is being presented in the classroom, with their own experiences or prior knowledge. This would require that they be given time to recount relevant stories or anecdotes. When new material is introduced, pupils should be allowed to experience uncertainty, to explore the new knowledge and experiment with it through individual or group activities.

2.2. Pupils' written tasks

Pupils should also be given the opportunity to consolidate what they have gained in the lesson through meaningful activities, which make cognitive demands on them, rather than simply regurgitating what has been presented. Thus pupils should demonstrate an ability to apply new knowledge in situations other than those presented as part of the lesson. These should be demonstrated through their responses in class, through practical activities undertaken both in the classroom and out, and through written task. Through the presentation of the outcomes of the lesson, learners could be drawn into assessing their own development. Have they gained what the teacher said they would gain in the lesson?

PART 7

PRELIMINARY RESULTS FROM INVESTIGATIONS

1. Teacher profiles

All the teachers with whom we worked had either Primary Training Certificates or Diplomas. Two of the teachers had completed Further Diplomas in Education at Rand Afrikaans University. In the township schools, teachers tended to have taught from 3 - 12 years while the farm school teachers had taught for much longer - one of the teachers had 26 years of experience.

None of the teachers had attended any in-service training courses other than one who had attended Maths and Science courses run by the IDT. Any input on teaching and teaching methodology had come from subject meetings organised by the education department.

Summary of teacher profiles

Teacher	Gender	Grades taught	Qualification	Experience	Language Policy	Stated approach to teaching
1	M	Multi 2-7	JPTD	10	E60%S40%	Whole class
2	M	Multi 2-7	SPTD	26	E70%S30%	Repetition
3	F	Grade 4	JPTD	3	Mainly S	Group work
4	M	Grade 6	SPTD	5	Mainly E	Discovery
5	M	Grade 4-6	SPTD	4	Mainly E	Play way
6	F	Grade 4-6	SPTD	12	E75%S25%	Whole class
7	F	Grade 7	SPTD	3	E70%E30%	Involve learners
8	M	Grade 3-5	SPTD	5	E75%S25%	Group work
9	M	Grade 6	SPTD, FDE	6	E80%S20%	Engage learners
10	M	Grade 7	SPTD	7	E70%S30%	Use many aids
11	F	Grade 2-3	SPTD, FDE	12	E80%S20%	Prior knowledge
12	M	Grade 7	SPTD	12	E60%S40%	Group work

1.1 Lesson preparation

The main form of preparation for lessons is consulting the work programme and reading through different textbooks, where different ones are available. Estimated time spent on preparation varied from 10 minutes to one and a half hours and teachers said time spent depended on whether they had taught these topics before and whether the children understood them - it is not clear from this whether this response applied to their knowledge of the pupils or their experience of having taught the topics before. One teacher said that it took him one or two days to prepare a lesson. In discussion we found out that he was referring to the time spent on developing a new set of lessons and learning material. Most teachers get their teaching resources from the school.

In the questionnaire six teachers said they obtained resources from the public library although they contradicted this in discussion. Some teachers said that they used atlases but there was no evidence of atlas work in the classroom during the period of observation. One teacher said that she got resources for magazines and there was evidence to support this in her lessons.

1.2 Classroom language policy

All of the township teachers said they ran bilingual classrooms. The Grade Four teachers said they spent the majority of time in Sotho whereas the Grade Six teachers said they spent the majority of time in English, using Sotho only for explanations when the children did not understand. Farm schoolteachers said that their classroom language policy was to use English but both admitted to using Sotho for explanation for about 30 - 40% of their time in class.

1.3 Learning and teaching

We felt that this was the most important section of the teacher profiles as an understanding of learning informs teaching praxis. We also felt that the question made explicit for the teachers what their work is all about. Teachers were asked how they thought children learnt best and how this affected their practice in the classroom. Often their answers were contradictory and often what they said had little to do with what they did. In order to convey what they said we have tabulated exactly what the teachers said and compared it with observations made in the classroom.

How children learn	Stated practice in classroom	Actual practice in classroom
Let pupils discover things on their own. Using field trips.	With the help of resources and source of information	This school did go on a field trip while I was working with them but there was no evidence that this had been followed up in the Geography classroom. <u>Pupils were never given an opportunity to discover things for themselves during the observed lessons.</u>
Prior knowledge must be considered	Asking questions to ascertain whether they are familiar with the learning matter	Lessons were dominated by question and answer interactions. <u>There was no evidence that the questions were structured in a particular way or that the teacher was directing questions at particular learners.</u> Teacher did not direct questions at particular learners.

When discovering for themselves	By grouping them and give them topics	Children did work in groups during one observed lesson. They were also expected to identify and classify pictures on their own.
<u>Playway method, concrete objects, exploration,</u> explaining things using the language of their preference.	By bringing materials related to the lessons.	This teacher never brought <u>any</u> concrete objects to his lessons. The children were never given an opportunity to learn through play or to explore new topics in the classroom but they were asked to explain the effects of heat.
I will realize by their classwork.	By enforcing the pupils to learn on their own.	This teacher used the <u>traditional rote-rhythm</u> method with children doing a lot of repetition in class. In the lessons which I observed, they always worked together as a class and never on their own.
By being engaged in the lessons being taught	By asking questions and giving them projects and homework to do	Teacher asks questions but the questions are <u>simple recall questions</u> and do not encourage the class to engage with the material at a critical level.
When the teacher does the lesson over and over. The pupils must speak and practise.	By repetition.	This is exactly what the teacher did - he <u>repeated himself</u> a lot, then asked questions to which pupils had to give answers related to what he had being saying.
They learn best when you explain the aspect to them and give them chance to discuss it <u>in groups</u> during their spare time.	By teaching as a whole class.	This teacher <u>always taught the whole group</u> and never asked children to work in groups.

In terms of dealing with children ahead or behind the others, most teachers said they give fast learners extra work although there was no evidence of this. One teacher from Bofula Tshepe said that she helped slower learners after the lesson had been taught and at times asked for help from the school's remedial teacher. Teachers said they dealt with slow learners differently - through giving them simple problems to solve, more time and encouraging them to work with fast learners. Two teachers said that because there are so many children in her class, she does not

have time for slow learners and therefore neglects them. Some teachers said that he worked with slow learners after school.

1.4 Teaching resources and materials

All the schools in which we worked had sets of classroom textbooks which the teachers did not use with the children. The teachers are very unhappy with the books as they say they are outdated and too difficult for their children to read by themselves. Most of the classrooms had maps but again these are outdated. The Zamdela and Tumahole schools had new maps of Africa from the department but these were kept in the staff room for safe keeping. None of the schools had maps indicating the new provincial boundaries of South Africa. This is especially problematic with regard to South Africa because of the new provinces which the teachers are expected to teach.

Most the teachers said that they gave notes on the blackboard but we only saw two lessons in which notes were given for children to copy down. The blackboard was used to give exercises rather than notes.

Although two of the township school had duplicators, only the teachers from one school said they could use it but that there was a problem with paying for the paper.

Some teachers used photocopied materials in their lessons. These copies tended to be diagrams or pictures, which the teacher would encourage the class to interact with during the lesson. The photocopies were usually drawn from a textbook.

1.5 Classroom organisation and assessment

Twelve of the sixteen teachers who participated in the project said that they felt most comfortable working with groups but only two of these teachers ever used group work in the lessons observed. Teachers said that they felt that group work was more effective because the learners were more relaxed and they could see which of the learners were struggling. The rest of the teachers said they preferred whole class teaching. They said that this was because of the large numbers of learners in their classes and they would be unable to control group work.

It would seem that the teachers use a wide selection of assessment methods. All except one teacher, said that they feel that it is more important for children to apply information than recall it but there was little evidence in the work which we observed.

1.6 Teaching Geography

All the teachers except for one said they enjoyed teaching Geography because it was useful and practical in real life. Lack of resources was seen as their biggest problem and the fact that the books, which they do have, are outdated and they will not be able to use them once Curriculum 2005 has been implemented. Some teachers complained that they were unable to take the learners on field excursions because of a lack of funds. They felt that this was an important component of Geographical Education Teachers from Ntshwanatsatsi, however, also complained

about the fact that their classes are too big. They feel that the education department could support them through running short courses and workshops for teachers, supplying new textbooks and other support materials and reducing the size of the classes (Ntshwanatsatsi). With regard to Curriculum 2005, all the teachers expressed concern, saying that they do not know anything about it and therefore are concerned about its implementation.

2. Classroom observations

2.1 Teachers' mastery

2.1.1 Introducing new material

The majority of questions asked are data recall type questions - children are rarely called on to make a prediction based on something new they have learnt or even to give explanation of some phenomena around them.

Teachers' introductions are varied. Some teachers make no mention of what they are planning to cover in their lessons but simply launch into whatever it is they wish to teach. Normally some attempt is made to link new material to children's previous knowledge - either of work previously covered in class or from children's experience of the world - but children's opinions are seldom sought.

The teaching style is invariably teacher-centered. Most lessons are delivered in a question and answer form. All new work is presented orally although teachers might use a map, a chart or a diagram on the board to support or illustrate what they are saying. Children are asked questions which refer to work previously completed or general knowledge. Often the children are unable to answer, then the teacher supplies the answer and continues. In some cases, teachers resorted to a more lecture-style approach. In two instances, group work was used - interestingly both times were when the teachers had used Sotho material for preparation but this could be incidental.

2.1.2 Language usage

Different teachers used language in different ways. In the Grade Six lessons observed, teachers taught almost exclusively in English however all instructions and any personal talk was in Sotho. The number of simple questions which the pupils could not answer was extremely high and possibly the fact that the children did not understand the questions could be responsible. There were instances of children answering difficult questions e.g. 'What are the factors of settlement?' in a singsong chorus which is indicative of the children having learnt it off by heart and having no idea what they are saying.

By contrast, some Grade Four lessons are given almost exclusively in Sotho but all the notes which are written on the board are in English and the lessons function often more as vocabulary

learning exercises than as introductions to a new learning area. Grade Five lessons tend to fall between the two with the teachers using English first and then repeating or giving explanations in Sotho. In all instances, however, children are expected to answer questions in English unless the teacher is repeating something in explanation, then they might ask a question in Sotho.

2.1.3 Consolidation of new work

This is the area, which gave most concern. The general lesson pattern was that-towards the end of the lesson, the teacher would write questions on the board or the children to answer although there were two teachers who never gave any written work. Both teachers seemed to have general organisation problems and invariably simply ran out of time.

The questions given normally referred to what had been covered in the lesson, however they did not always refer to the main points of the lesson and seemed, in some instances, to be rather hazard. None of the questions moved beyond data recall skills. But the most worrying thing about the tasks that were set was that the children only wrote down the answers. Thus, all they were left with, at the end of the lesson, was a list of disconnected words. This means that the children's ability to process information and their expository writing skills are not being developed at all. It also means that the children have nothing from which to learn when they write tests, given that the teachers strenuously maintain that they are unable to process the textbooks. They have nothing to turn to if they are unsure or do not fully understand what the teacher has said in class.

If one compares these books to books included in the Threshold or Langan report, one can conclude that children are in a worse position in terms of developing skills or learning information now than they were when the earlier research was carried out where notes, were given even if they were problematic.

2.2 Teachers' coverage

Langan, (1993) found that one of the reasons that teachers were unable to process their Geography texts was due to the fact that they lacked background in the discipline. In the lessons we observed a number of factual errors occurred which would confirm Langan's findings. In lessons on seasons and temperature, reference was constantly made to the sun's movements being responsible for changes in temperature, teachers were unable to name the premiers of the provinces. The eastern Free State was described as a mealie growing area, the occurrence of rainfall was linked to temperature. Teachers did not like it when these errors were pointed out to them but although the seriousness of error differed, the fact that teachers feel unsure of their knowledge and not go out and fully research lesson topics before they, teach, means that they get into defensive teaching, from the bottom line rather than feeling confident and encouraging children to experiment with concepts with which they feel comfortable.

2.3 Materials used

Although a much more detailed analysis needs to be done of the lessons which we observed in relation to the materials used, we would say at this stage that a change in the medium of the materials used has not made a difference to the quality of teaching and therefore to what the pupils gained. Reasons we would like to put forward for this, at this stage, are that we feel that the teacher's level of skill interfered with what we were trying to test. Teachers have very set patterns of work and although there was a lot of discussion about how they worked and what they used as reference material, not much change was evident in the way they went about teaching.

A second problem was the nature of the Sotho material. To a large extent, it was not the kind of material that is found in the text books with which the teachers are familiar and needed to be applied specifically e.g. 'Se etshahalang letsatsi le letsatsi hoThami, mokganni wa lori', is a story about a truck driver who goes from Durban to Zimbabwe, Zambia, Malawi and Mozambique. Instead of reading it to the children and asking them to extract relevant information which could have included a discussion about what was relevant, teachers extracted the information for themselves and then taught it, textbook-style to the pupils.

And while the teachers were extremely pleased with the new English material which we brought for them, especially the Grade Four teachers, as they have not had text books from which to work, and find it very difficult to implement the syllabus, there was once again, not a marked enough change in teaching to say that more child-centered material had made a significant difference.

3. Conclusions

We feel that until teacher-training is improved so that teachers have both information processing skills and the basic knowledge necessary to understand texts in the disciplines they have chosen to teach, one could provide state-of-the-art material and it would not impact significantly on their teaching style and that is where the effort needs to be expended. The depressing things about this is that both the Threshold Report and Langhan's thesis make recommendations about teacher education but there is no evidence of these recommendations having been put into practice.

**LANGUAGE AND THE HUMAN AND SOCIAL SCIENCES'
CLASSROOM**

RESEARCH REPORT

PHASE TWO

by

Kerry Pile and Annie Smyth

PHASE 2

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A. INTRODUCTION

In this part of our report we analyse the lessons we observed. We have done this through the use of schedules presented in the first part of the report in which certain key elements of effective teaching were identified. When teachers used these, they were noted.

The main focus of our research has been teachers and their performance. We have, however, included an analysis of children's responses and have checked their written work in an attempt to gauge what they gained from the lessons. A more accurate assessment of what children gained falls beyond the scope of this study.

B. DATA ANALYSIS AND INTERPRETATION

In this section, we look at what each teacher stated they believed about teaching and learning based on Schedule 2 - Teacher Profile Schedule. We then analyse lessons, using Schedule 6 - Classroom Presentation and Analysis Schedule. On Schedule 7 - Phase Comparison Schedule - we combine the analysis of each lesson in order to assess whether change in the language medium of preparation material made a difference to the teachers' practice. We include teachers' comments about the materials taken from Schedule 4 - Feedback on using Sotho materials for preparation and Schedule 5 - Teacher assessment of materials used. What follows is a brief report on each teacher.

TEACHER 1

1.1 Background information

This teacher worked in a multi-grade classroom that included Grades 2 - 7. The language policy at the school is English from Grade 1 with support in Sotho. The teacher saw the Human and Social Sciences as an important part of the primary school curriculum as he felt that children should know about different places; that they should know about oceans and mining so that they can do research when they are older and he felt that they should know about their forebears and European history. He also feels that Geography, in particular, has a practical use in that it helps pupils to find their way around strange places.

He uses different textbooks, newspapers and atlases as his source when he prepares lesson. He estimates that he spends about 40% of his time using Sotho in the classroom although this was not apparent in our observations. He feels that children learn best through teacher explanations and are best taught in a whole-class situation. This was consistent with what we observed. He does, however, say that children should discuss their work in-groups in their spare time - something, which is difficult for him to control. The teacher maintains that he allows fast learners to work ahead while he deals with slower learners. He says that he spends time with slower learners after school. The only differentiation that we observed was that in different lessons, one grade or another was told to read sections from the textbooks while he taught the rest of his class. The teacher pointed out that, as his class is small, there is time for him to work individually with pupils.

The biggest problem which this teacher perceives in the teaching of Geography is that he finds the information in the textbooks deficient and says that the school does not have enough support material. As a result of this he feels that his pupils waste time, copying notes from the

board. He also has to draw his own maps, as the maps, which he has, are out-dated. He feels that the Department of Education could support teachers by running an annual workshop in which new information could be given out and as a refresher course.

1.2 Lesson topics and materials used

Lesson no.	Lesson topic	Materials used in preparation
Lesson 1	South Africa's neighbours - Lesotho	The teacher used his own materials – Active Geography, Std 4
Lesson 2	The provinces of South Africa	Ho etela ditulo tse ding: This article in Sesotho covered the 9 new provinces and their capitals and their premiers - although in some cases these had changed since the article had been written. Detailed information was provided in individual articles on the following provinces; Northern Provinces, Mpumalanga, Gauteng, KwaZulu/Natal, Western Cape and Eastern Cape. There was some confusion in that the teacher told me verbally that he had used the Sesotho material but in Schedule 4 admits that he did not use it. This is obvious in that he states that the material did not included Sotho terms such as the word for province (lebatowa) which it did. In Schedule 5 he states that he drew on his own knowledge for this lesson.
Lesson 3	The provinces of South Africa – the Western Cape	? <i>Western Cape - lebatowa la boithabiso</i> ? <i>Explore your province</i> ? The teacher says that both texts were useful as they provided broad information, as well as the specifics which the learners needed.

1.3 Comparison between lessons

1.3.1 Introduction to the lesson

The teacher made the aim of the lesson clear in Lesson 1 and 3 in that he stated what the children were to learn about. This was not stated as an outcome i.e. what the children would be able to do. He started every lesson with a revision session of what had been previously taught thus establishing clear links between previous and new work. In all three lessons the children were expected to supply a lot of information drawing from their own knowledge. When they were unable to do this, the teacher gave the information to them.

Personal links with the information taught were established through mention of a school visit to Gauteng and a planned visit to the Western Cape. Children were also encouraged to examine bottles that their fathers bought at the bottle stores to reinforce information regarding the production of wine and brandy in the Western Cape. We feel that much more could have been made of the learners' knowledge and experience. In the lesson on Lesotho, it was obvious that a number of children had visited Lesotho but they were not asked for their observations of the country. With reference to their visit to Gauteng, children were only asked what places they had visited. Again observations and opinions could have been sought which would have helped children to integrate new information presented in the lesson with their own experiences. However, there was some improvement in this area in that in the first lesson, no attempt is made to draw on children's experience while in the second two lessons, this did occur.

1.3.2 Body of the lesson

All three lessons were very teacher-centred and in terms of methodology, there was a deterioration in teaching style in that the third lesson veered much more towards a lecture-style than the more participatory question and answer approach employed in the first two lessons. The reason for this could be that the pupils knew virtually nothing about the Western Cape and thus had no knowledge from which to draw.

The teaching of location and use of maps were a prominent part of the lessons with children being asked to locate places on maps provided by the teacher. Thus learners demonstrated an ability to work with both political and physical maps.

The way in which the information was presented showed, in most cases, clear organisation e.g. in the lesson on Lesotho and the Western Cape, towns and rivers were presented, then climate, physical build and agriculture. In the lesson on the provinces, the same order was followed for each province, viz. the name of the province, the premier, the capital and products. The teacher included places of interest. In some instances he started the next province and then backtracked to places of interest of the previous province.

In all three lessons the teacher introduced elements of History/Current Affairs through reference to recent elections and winning political parties.

The lesson focussed on the transfer of information rather than the development of skills or understanding of processes and relationships. In the analysis of the questions asked by the teacher, he only asked one question, which required an explanation all, other questions required either data-recall or naming answers. Thus little attention was devoted to building learners' understanding relationships between natural resources and settlement patterns

which the lessons on Lesotho and the Western Cape could have done. In the lesson on Lesotho children were expected to repeat the factors of settlement which they did in a singsong manner which implied that they had learnt these off by heart. In the lesson on the Western Cape, the relationship between the availability of water and settlement was mentioned. In both instances, much more could have been made of these. Children could have been asked to explain the positions of towns in relation to physical resources. Their ability to interpret data and their understanding of relationships between human and physical resources could have been developed.

This development of skills and understanding is for us the most important part of teaching and the weakest part of the teacher's lessons. Because the teacher focussed almost exclusively on the transfer of information, the lessons never developed further than a collection of facts to be learnt by rote. This was an extremely difficult task as the lessons were extremely long and contained an enormous amount of factual information - for example, in the lesson on the Western Cape, the teacher gave the names of 22 towns. Even in the first lesson on the provinces, the number of names which the learners were expected to learn was an impossible task. This was made obvious by the number of errors learners made during revision sessions in which they confused capitals of provinces and premiers.

No attention was paid to developing learner attitudes of curiosity or empathy. Children were simply expected to be quiet and answer questions or locate places on maps. No attempt was made to present the lesson in a child-friendly way.

1.3.3 The text and the lesson

In all three lessons the teacher gave more information than was contained in the texts which he used. However, he omitted all personalised stories, which the articles from Bona contained which could have helped children to relate to the information on a human level. The stories could also have been used to help children develop their information accessing and analysis skills, using everyday information and abstracting information from it. In relation to the products of both Lesotho and the provinces, only one or two products were mentioned; no link was established between climate, physical build and products.

The teacher made a number of factual errors which included things such as Mpumalanga bordering on Lesotho; Thaba Ntlenyane being the source of the Orange River; Middelburg being the capital of Mpumalanga and Table Mountain being the highest mountain in South Africa. More serious errors, i.e. errors which would confuse pupils' understanding of geographic concepts included statements such as, 'Lesotho is not suitable for crops therefore it is used for animals.' Children who have visited Lesotho would know that Lesotho is not suitable for crops but everyone grows them therefore everyone is very poor and few people have animals. In the lesson on the provinces, the teacher accepted only grapes as being grown in the Western Cape and refused to accept deciduous fruits which led to children making wild and improbable guesses about what did grow there.

1.3.4 Teaching and learning aids

The teacher used maps extensively in his lessons. Unfortunately the map which he had of southern Africa was out-dated. The teacher added the new provinces to it by outlining the new provinces with a red pen. This was not very clear. He also drew his own map of Lesotho and the Western Cape. These were not well drawn and therefore reading them was difficult - the children gained only a vague idea of location from them. However the teacher cannot be

held responsible for this and some way of getting up-to-date and relevant maps into the schools needs to be found.

The teacher used the chalkboard extensively, writing up key words, often explained in Sotho and written up in English, thus building children's geographic vocabulary and alerting learners to key words and names. In the lesson on the provinces the teacher produced a useful table which included the provinces, premiers, capitals and minerals for each province. This gave learners practice in retrieving information from tabulated text.

1.3.5 Consolidation of new work

This teacher concluded every lesson with a summary of the information, which he had presented. In the first two lessons, tasks were set for the children to complete individually. The first task was the answering of questions on Lesotho and the second a completion of a map and the listing of premiers and minerals. Like the body of the lesson, the tasks centred on simply listing names. Children were not expected to use higher order cognitive skills but the map of the provinces provided for the development of learners' geographic skills. In the last lesson, notes were given which the children copied from the board.

1.3.6 Assessment

The work, which the learners completed, did not count towards general assessment of their abilities. It was marked together in class with individual learners giving answers which the teacher wrote on the board and which were used for corrections. The teacher went around the class, checking children's books while they did corrections. The maps were taken in for the teacher to mark and even the notes were checked. In some instances nonsensical sentences were marked correct such as '2 countries of RSA are Lesotho and Swaziland'. Sometimes the corrections made less sense than the original error, e.g. 'The climate of Lesotho is capital M.'

1.3.7 Language use

In the first lesson, the teacher used English almost exclusively. Where children did not understand, explanations were given in Sotho. In the second lesson he taught through the medium of Sotho but all the notes were given in English and in the third lesson he first taught in English and then gave a summary of the lesson in Sotho. The reason given for the use of Sotho in the second lesson and the summary in the third is that it was aimed primarily at the Grade 4s and their English is not adequately developed for them to understand the lesson.

In feedback on the materials, the teacher felt that the children were more comfortable using Sotho and therefore participated more readily in the class. He also felt that they understood more easily but the teacher was obviously uneasy about using Sotho as he referred to the examiners and the decision taken by the governing body vis-a-vis the use of English as the medium of instruction. However the teacher said that he found reading in Sotho easier than reading in English.

1.4 Learner performance

1.4.1 Classroom responses

As the teaching approach was a question-and-answer one, the children were asked an enormous number of questions many of which they were able to answer, drawing on their own knowledge, with a few children providing most of the correct answers. The children were required to repeat words or names, which the teacher thought they might find difficult. This they did with great patience.

An analysis of their errors indicates that there were weaknesses in their understanding. These include an inability to express direction and confusion with names of capitals, premiers and products. Given the enormous amount of names they were expected to remember, this was not surprising. Some errors could be ascribed to language difficulties - the children were unable to name a cable car but could explain what it did in Sotho, and 'tip' and 'top' were confused - leading to locational problems in explaining South Africa's position.

1.4.2 Classwork books

Their books contained the tasks completed in class. There were examples of children copying down questions or notes incorrectly, leaving them with nothing to learn from. These errors indicate, as Langan (1993) found, that children were doing down information with little or no comprehension, exacerbated by the fact that the information is decontextualised. If the work which learners were expected to do made greater cognitive demands on them, i.e. if they had to explain processes, or apply or analyse data, perhaps the number of errors would drop.

TEACHER 2

2.1 Background information

This teacher also taught a multi-grade class, which included Grades 4 - 6. He says he writes out his preparation and collects resources to use in class. He uses resources, which are supplied by the department and, at times, goes out and finds his own. He estimates that he spends about 113 of the lesson time in Sotho although this varies depending on whom the lesson is aimed at - if it is a Grade 4 lesson, he spends more time in Sotho and if it is a Grade 6 lesson, he spends more time in English.

He believes that learning occurs through repetition and his teaching practice is consistent with this, children being required to repeat key and new words. But he also believes that pupils must speak and practise their newly gained evidence.

The teacher has no access to duplicating facilities so he uses the chalkboard extensively and makes his own wall charts. Often these are not very accurate and as such, do not enhance children's understanding of location or map-reading skills. However, the teacher should be commended for doing this.

The teacher does not simply rely on formal tests for assessment purposes but says he uses classwork and homework as well.

He likes teaching map work as it is practical but finds sections of the syllabus with which he is not familiar, such as climate, more difficult to teach. He would like more maps and charts to use in class. He also feels that workshops in the Human and Social Sciences would be

useful. He feels anxious about Curriculum 2005 as he says he does not know what to expect. This was substantiated as he could not isolate geographic skills and was surprised to hear that he was using geographic skills in his lessons.

2.2 Lesson topics and materials used

Lesson No.	Material used	Material used Lesson topic
1.	Relief of South Africa	<i>Active Geography, Std 3</i> The teacher uses this book as it is the only thing he has. He feels that the illustrations have some value but the information is limited and there are too few illustrations.
2.	Weather and climate	<i>Boemo ba lehodimo</i> The teacher said that he found this material more suitable for his learners than the text book. It also made explicit the relationship between tourism and Geography and the use of maps for different purposes. He also said that he liked the way in which stories were used which could be understood by the pupils although he never used them in class.
3.	The provinces of South Africa.	<i>Ho etela ditulo tse ding</i> The teacher felt that this article was clear and to the point <i>Explore your province</i> The teacher felt this included new ideas and approaches, with well-laid out maps and activities which encouraged children to do their own research. He liked the regular exercises. The teacher felt that it was useful to have texts in both languages as the English texts would help to prepare pupils for secondary school while the Sotho materials helped pupils to understand more fully.

2.3 Comparison between 3 lessons observed

2.3.1 Introduction to lesson

This teacher informed the pupils what they were going to learn about - stated as knowledge they would gain - how this was of use to them was not made explicit. The teacher did not state the intention of the lessons consistently. In the first observed lesson, he did this at the beginning of the lesson but in the other two lessons, he only mentioned the aim of the lesson after he had completed often a lengthy revision session and thus any effect tended to be lost.

There was always some connection between the children's lives and what was taught in class in all three lessons. In Lesson 1, the teacher spoke about where the Free State was in terms of the relief of South Africa. In Lesson 2 the link between the world of the classroom and the world the children inhabited outside of school was most closely made as the teacher linked weather to children's choice of clothing and how they made their choice. Children were also called on to give their observations with regard to temperature changes during the day. In the last lesson, children were simply called on to give information vis-a-vis the provinces, which they had gained at home through the radio, television or through listening to their parents, talk. This teacher's use of learners' experience was greater than Teacher 1 but could be further developed.

Teacher 2 consistently established links between what he was teaching to information he had previously taught. In the lesson on the relief of South Africa, he revised the position of the country and the surrounding oceans. In the lesson on climate and weather, he revised the seasons and important lines of latitude and in the lesson on provinces, he revised climate and relief. Map reading was used in all lessons and some *attention* to map-reading skills was evident.

2.3.2 Body of lessons

The teacher employed the dominant question-and-answer style of teaching although he slipped into lecturing at times. He gave some attention to symbols used on maps - in Lesson 1 he showed that the coastline is represented as a line on a map and in Lesson Three he dealt with symbols for towns of different sizes. He could have spent more time on map reading skills by referring to colours used to depict altitude on physical maps. The teacher assumed a lot and could have paid to developing children's map-reading skills.

This teacher spent a lot of time teaching geographic terminology - the lesson on relief focused on four main terms - coastline, coastal plain, escarpment and plateau. The lesson on climate and weather was similar, terms being given in both English and Sotho. Teaching the location of the provinces and their capitals was the focus of the last lesson we observed. The hand-drawn map, which the teacher used, was not accurate but the teacher should be commended for developing his own maps.

The lessons were not well organised. The teacher tended to move from one topic to another and back again. Concepts were sometimes confused. In Lesson 1 the teacher could not adequately link the Karoos, highveld and plateau - in part this was due to the way in which they were presented in the textbook - a problem which Langhan isolated and described in 1993.

The second lesson on weather and climate also tended to jump around with factors such as the equator being brought in. A lot of attention and time was given to temperature but not to other elements, which make up weather and climate such as rainfall and prevailing winds. The teacher then lost the thread of the lesson when *-honyela* was wrongly translated as 'to condense' rather than 'to contract'. As a result he listed various types of precipitation e.g. rain, dew, mist etc.

In the third lesson the information was presented in a more orderly way - aided by the fact that the teacher had a table on the board which he filled in as he covered each province. However, when he discussed wild animals and natural resources, he did not link these to which provinces they were to be found. He then returned to the provinces and made the learners locate and list rivers found in each one. The lesson was extremely long and consisted almost entirely of naming provinces, premiers, capitals and rivers. The learners were overloaded with names.

Little attention was given to learner attitude, as was found by Macdonald (1990). The children were expected to be quiet and answer questions when asked and that is what they did.

The teacher linked the first observed lesson to History, bringing in the arrival of Europeans and the coastline inaccurately. Other than that, he drew on children's general knowledge of current affairs.

The teacher tended to ask questions which operated at low levels and required, at times, straight repetition either of what he had said or of a correct answer given by another learner. Most of the questions asked were at the data recall/naming level. There were a few questions, which related to location and graphicacy. However in his second lesson, which had the weakest consolidation exercise, children were required to comment on observations which they had made about the world around them.

2.3.3 Text and the lesson

In the first lesson, the teacher used the information that was in the textbook but in the other two lessons, he included extra information. In the second lesson this was the measurement of temperature and the positions of the sun and in the third lesson, he included premiers as is required by the work schedule.

The errors, which the teacher made, showed that his geographic knowledge was weak. He wrote the Pacific Ocean on the board as lying to the south of South Africa; he stated that the coast of South Africa is irregular so there are lots of bays at which European sailors could land; he linked the occurrence of rainfall to temperature and got a few capitals and premiers of the provinces wrong. This is problematic as it could adversely affect children's understanding of relationships and processes in Geography.

In terms of omissions, the teacher did not include the effects of weathering on relief or the names of the main mountain ranges, which make up the South African escarpment. In the text used for the second lesson, there was a very sweet exercise that tested whether children understood the difference between climate and weather, which the teacher chose to ignore. In the third lesson, the teacher's selection of what to teach was somewhat random - thus he mentioned different kinds of fruit but did not link them to the provinces.

2.3.4 Teaching and learning aids

The teacher used maps extensively in class thus building the notion that Geography is about location. As we have said above, some of the hand-drawn maps were problematic. This teacher was the one of the few to use the textbook although he only required the learners to look at maps of rainfall and temperature. He used the chalkboard extensively to write up key words, phrases and definitions although other than in the first lesson, the children were not required to copy these down. He was also one of the few teachers to give learners maps to use on their own during the lessons.

2.3.5 Classroom organisation

The teacher taught the whole class in all three lessons observed, except for the last. In this, he divided the class into groups, assigned each group a province and asked them to give the names of the rivers of the province, which had been assigned to them. This proved to be difficult as he did not have enough atlases and maps for each group to use so the resources they used tended to be rather make-shift - KTV all about South Africa, his hand-drawn map etc. However, this demonstrated a move away from the teacher-dominated classroom to one in which the children were actually finding information for themselves and applying their map-reading skills.

2.3.6 Consolidation of new work

In the first lesson, notes were given which included definitions of the four main physical features covered in the lesson. The children then had to identify symbols on a hand-drawn map depicting the coastline, coastal plain, escarpment and plateau. This was closely linked to the content of the lesson. The children were not required to copy the map into their books so that they ended up with a list of decontextualised words and, given that the teacher insists that the children cannot use the textbook, this is all they have with which to revise their work.

In the second lesson the children were expected to give definitions of climate and weather, list media of forecasts and name one town that has rain in winter. Whereas the definition of climate and weather are important concepts in Geography, the level of the tasks remains at that of data recall only.

In the third lesson, the learners were required to list names only - those of the provinces. Some question required children to categorise the provinces into those which border on the sea and those that don't. This did not relate to the lesson at all but was well within the ability of the children and required that they categorise the provinces by themselves. It involved locational knowledge. Learners were also asked to find out the names of premiers that had changed since the introduction of the new provinces. Thus they were required to find information for themselves.

In the consolidation of new work, this teacher expected his learners to operate at a higher level than that of Teacher 1. In the first lesson definitions were given which learners had to apply in relation to a map and in Lesson 3 children also worked independently, both applying their skills and finding information.

2.3.7 Assessment of work

In all three lessons the children completed and marked their work in class, using answers giving by other learners to do so. The teacher took their books in to check their work. Marks were given for some exercises which the teacher used for general assessment.

2.3.8 Language usage

This teacher used Sotho more extensively than other teachers did. He taught the second and third lesson in Sotho. When he taught in Sotho, the learners were given important or key words in English and vice versa. The teacher felt that the children were more comfortable working in Sotho and therefore more active in the classroom when Sotho was used which seemed to be the case when comparing the three observed lessons.

Language interference was particularly obvious in the lesson on climate and weather. In Sotho there is only one term - *maemo a lehodimo* - which literally means the conditions of the sky and is used normally to describe weather. It can however be used for climate if one stipulates the time period about which one is talking. Thus Geography teachers need to be especially careful that children understand the difference in the two concepts and why these differences are made. This was not explicit in this lesson. The teacher got himself into further language trouble, as we have noted above, by accepting a mistranslation of - *honyela* while he was explaining how a thermometer worked.

2.4 Pupil performance

2.4.1 Classroom responses

The majority of the responses asked for and given by the learners were at a data recall or naming level. The children seem to deal with fairly well although they were also called on to make observations based on their experience and to explain how a thermometer works which they could not do. The errors that occurred included things like getting the year of the first democratic elections in South Africa wrong, the number of people in South Africa and the names of the capitals and premiers wrong. These are not serious as they simply show inability to remember facts.

More serious problem are those responses which indicated that the children had not understood the main point of the lessons e.g. learners could not explain what a coastal plain was or what *maemo a lehodimo* meant at the end of the lesson. They also confused their definitions of climate and weather. Locational problems included saying that South Africa is found in the Free State, the Pacific Ocean lies to the south of South Africa and naming Mozambique as a province of South Africa. Map-reading skills are not fully established, for example, one child gave Midmar as a river while other children were unable to locate South Africa on the map of Africa.

Language problems other than the mistranslation of -*honyela*, included an inability to describe the position of South Africa orally; an inability to express South Africa's position - children said it was down or between. Children were unable to name the coldest season and to link months to the seasons which indicated either that they did not understand the question, that they did not know the answer or lacked the names for the seasons and the months.

2.4.2 Classwork books

Learners' classwork books reflected work fairly well controlled - in all the books at which we looked, we found that the work had been completed, corrected and checked. The largest problem is that although the teacher gave notes in the first lesson, in the other two lessons the children were required to simply write down the answers of the questions set for them, like the learners of the previous teacher. Learners' mapwork is weak - the maps, which they drew of South Africa, to show the new provinces, had little to do with reality and is a problem that needs to be addressed.

TEACHER 3

3.1 Background

This teacher has taught for three years. She teaches Grade 4 exclusively. She uses different textbooks when she prepares for a lesson. She believes that children learn best when discovering things for themselves. She says she implements this approach by dividing them into groups and giving them topics. She used group work in the first lesson which we observed but the children had to apply the information and skill (categorisation) which they had learnt (the teacher does note this as being more important than children recalling information) rather than to discover things for themselves. She also says that she gives faster learners extra tasks. In her estimation of how she uses her time, she says that the learners spend most of their time working either on their own or in groups, with less time being spent working as a whole class. She also says that she feels most comfortable doing group work because it gives her the opportunity to check individual's understanding. We saw little evidence of the above in her lessons.

The teacher uses both English and Sotho in her lessons although Sotho predominates as she says the children use only Sotho in Grade 3 so they need Sotho in order to understand. She teaches mainly in Sotho but writes all notes in English.

The feedback on the materials from this teacher were confused as she did not stick to the pattern which we had prepared viz. use of texts which they ordinarily use, use of Sotho texts and then use of English and Sotho texts. The teacher uses *Modern Geography for all, Std 3*. There are only enough of these textbooks for the teachers - in fact she borrows the Grade 5 teacher's book in order to prepare her lessons and gives the children notes on the board based on this book. The school has class sets of *Active Geography* but the teacher does not like it. She says that it is outdated.

She feels that Geography is important as it teaches children direction and enables them to understand weather reports on television. Her biggest problem in teaching Geography is that she does not have any resources as the textbooks and maps, which the school has, are outdated. She feels that the education department should supply the school with relevant resources. She says she knows nothing about Curriculum 2005 but feels that it will be better than the present system as it will include a mixture of ideas.

3.2 Lesson topics and materials used

This teacher seemed to misunderstand what we were trying to test. She used pictures from the *Bona* articles in her first two lessons and in the third lesson chose a topic, which was not covered by the articles in Sotho.

Lesson No.	Lesson topic	Material used
Lesson No. 1	Transport	<i>Modern Geography for all, Std 3</i> The teacher followed this text very closely although she did not include the relationship between transport and what is transported <i>Ho eta naheng</i> This article was aimed at teachers and child-minders and included a number of suggestions for how to teach transport by relating it to children's lives. The teacher chose only to use the pictures and the suggestion that magazines be used to find examples of transport. Her lesson would have been enriched if she had used more of their suggestions.
Lesson. No. 2	Fishing " "	<i>Modern Geography for all, Std 3</i> " Again the teacher used the information provided in this text although she excluded information about commercial fishing and types of fish. " " <i>Ho eta metsing</i> " This article, like the one on transport included suggestions on how to go about teaching about life in water through personalising the topic. It included suggestions on how to use the picture in order to encourage children to make observations and draw their own information from it. The teacher only used it to explain what a fishing line was like. In her comment on the material, the teacher says she liked the picture.
Lesson 3	Forestry	<i>Geography Std 2 - Rainbow Series</i> " The teacher drew most of the information she used from this text. Once again she excluded commercial forestry which would have helped children to understand more fully why forestry is important.

3.3 Comparison between lessons

3.3.1 Introduction to the lesson

The teacher explicitly stated what the class was going to do in the first two lessons but not in the third. Establishing links between the content of the lesson and the children's experience however did improve as she only drew on their general knowledge in the first lesson but in the third, children were asked to find examples of wood being used in the classroom. She made no links between her lessons but taught each one as a separate unit. If more attention had been paid as to why the children should learn about these topics, it would have helped her to establish links and to draw out relationships, rather than presenting each as a list of facts to be learnt off by heart.

3.3.2 Body of the lesson

The lessons were presented in a question-and-answer format with the teacher supplying most of the information and the children being required to repeat, usually a few times, key words. There was little evidence of either geographic information or skills being transmitted due to the fact that no links were established with regard to the importance of transport, and the relationship between human needs and natural resources. There was also no attempt to look at why fishing or forestry is important other than stating that we eat fish and we use wood. Some attempt to build responsibility was made in the third lesson as children were exhorted to look after trees.

As the lessons revolved around information transmission only, there was no concept building. However, the information, which the teacher presented, was always well organised into clearly defined units and sub-sections. As with the other teachers, little attention was paid to learner affect except in the first lesson where children were praised when they found pictures of different types of transport. The teacher only made connections with other learning areas in the lesson on forestry. The learners had recently completed an English comprehension on papermaking, which the teacher found and read out to the class.

3.3.3 The text and the lesson

The teacher kept closely to the information provided in the textbooks as stated above. She added little new information except in the lesson on fishing when children were asked how one cooks fish.

3.3.4 Teaching and learning aids

In all three lessons the teacher wrote notes on the board. The notes tended to be lists under relevant headings. They gave the children no opportunity to improve their ability to read expository text. In the first two lessons the teacher used pictures from *Bona* to introduce her lessons. Due to cash constraints at the school, she was only able to photocopy enough pictures for each row in the first lesson. This meant that the children had to look at the picture and then try to remember what they had seen. In the second lesson, she photocopied the double page picture of life in the water. The picture was too small for the whole class to be able to see it clearly. Nonetheless she was one of the few teachers to use pictures as part of her lesson.

3.3.5 Classroom organisation

The teacher taught to the whole class in all three lessons except for the first lesson. In this lesson the children were divided into groups. They were asked to find pictures of different types of transport in a magazine and say what kind of transport it was.

3.3.6 Assessment

The teacher said she assesses the children's written work in class however in the lessons we observed, the children were only given notes - they were not given written exercises or tasks to complete on their own. She does not include formal tests as part of her assessment although she was the only teacher who gave us the children's test books. From these we concluded that the children were given regular tests. The tests required that children give one-word answers. The one-word answers made it difficult to assess the tests other than to observe that learners' writing skills are not being tested.

3.3.7 Language usage

The teacher's classroom language policy is to use both languages in her lessons. She said that the learners in Grade 4 did not have a good enough grasp of English for her to use English throughout her lessons. The teacher mixed languages a lot, even in sentences. The children were taught all the key words in English however and the notes were given in English. All personal interactions and instructions were given in Sotho. Thus English was used purely for the formal part of the lesson. The teacher had some small language problems e.g. calling a fishing rod a fish stock (confusing English and Afrikaans) and translating *moru* as forestry rather than forest.

3.4 Learner performance

3.4.1 Classroom responses

It was very difficult to judge learner performance with this teacher. The majority of responses asked required that children simply repeat - usually more than once - what the teacher said. It showed extreme use of the rhythm-rote method. Children showed some categorisation problems, mixing categories with examples. They used the common misnomer for cooking oil i.e. fish oil and did not make the connection between fish and oil - they thought fish oil came from sunflowers, peanuts etc. They were unable to fully translate fishing - translating it as *tlhapi* (fish) rather than *ho swaswa* (to fish) and they confused fish paste with toothpaste.

3.4.2 Classwork books

The classwork books consisted of copied notes so we were unable to assess how much the children could do on their own. The notes were accurately copied but that is all we can say. As we have said in the assessment section, we were also given the test books but it was very difficult to draw any conclusion other than that children are being tested at a data-recall level.

TEACHER 4

4.1 Background

This teacher teaches only Grade 6s. He is unable to say how much time he spends preparing for the lesson but he uses different textbooks to do it. He uses mainly English in class but is happy to use Sotho when his pupils do not understand. He thinks that children learn best by discovering things on their own, through field trips and the use of resources for information. This, however this was not apparent in his lessons which were extremely teacher-centred with

many of the interactions between teacher and learner being repetition or children agreeing to statements made by the teacher. He said that he deals with faster and slower learners through differentiated tasks but in the lessons we observed, he only gave one task and this was not differentiated. He says that children's ability to recall information is more important than their ability to apply it and this is consistent with the way in which his lessons focus on naming and data recall. He says that he assesses pupils through their participation in class or group discussion but there was no evidence of any kind of discussion in his classroom.

He enjoys teaching Geography, as it is to do with reality. His biggest problem is outdated textbooks, which do not comply with the curriculum. He feels that INSET courses would help to overcome this problem and he feels the Department of Education should run more of these. He uses textbooks and maps and writes notes on the chalkboard. He says he does not have access to duplicating facilities although there is a photocopier at the school. It seems teachers use this for their own notes but cannot use it for notes or worksheets for pupils. He says he likes group work but never used this form of classroom organisation. His reason for this is that it gives one time to see which pupils are learning faster than the others are. He says most time in his class room is spent writing notes, explaining content and learners completing tasks on their own however the children had few notes and tasks in their books and in the lessons observed, the majority of the time was spent with the teacher giving input.

4.2 Lesson topics and texts used

Lesson No.	Topic	Material used
Lesson No. 1	Temperature and rainfall In the feedback in the lesson, the teacher claims to have taught natural vegetation.	<i>Modern Geography for all, Std 4</i> The teacher says that the text is simple and has more information. However we thought that the information was problematic in that the text talks about the 'apparent movement of the sun' which is confusing and links rainfall to temperature, saying that this will be more fully explained in a later standard. Both of these statements led to the teacher making problematic conceptual errors.
Lesson 2	South Africa's neighbouring countries	<i>Ho etsahalang ho Thami, mokganni wa lori</i> This text was in a story form. The text covered Zimbabwe, Zambia, Malawi and Mozambique. It gave details of main rivers, towns, daily life, places of interest and some historical background. The teacher felt that the information was not to the point and there was not enough information however he says that it did help him to understand certain aspects but found it difficult to translate certain Sotho words into English. He says that he liked the story form and that, as pupils liked stories, they would enjoy it although he never used it.
Lesson 3	Lesotho	No Sotho text available <i>World Fact files: Southern Africa</i> This text covered southern Africa generally. The information was carefully structured so as to give an overall picture of life and problems in countries surrounding South Africa. The teacher said he liked the pictures but did not show them to the pupils. From an analysis of the content of the lesson, it would seem that the teacher drew mainly from the textbook.

4.3 Comparison between the three lessons

4.3.1 Introduction

This teacher never made the aims of his lessons explicit. In the first lesson he used examples drawn from everyday life e.g. the boiling of a kettle and warmth generated by a stove or brazier. He attempted to do this in his other lessons but he drew on examples with which the children were unfamiliar. Thus in Lesson 2, he asked where migrant workers on the mines come from and in Lesson 3, he referred to the mines in Orkney and the mountains of Qwaqwa. From the learners' responses, it would seem that they are unfamiliar with the mines and most seem not to know Qwaqwa although they knew a lot about Lesotho.

There was evidence of links with previous lessons. In the lesson on temperature, the teacher referred to relief and altitude and he began the third lesson by revising the names of South Africa's neighbours although he never made the link between these and Lesotho explicit.

4.3.2 Body of lesson

The teacher employed a question-and-answer style of presentation although in the third lesson, his inputs had lengthened to a more lecture-style approach. An analysis of the types of questions asked show a high preponderance of questions that simply demanded 'Yes' for an answer followed by questions that required data recall or naming and a lot of straight repetition of either what the teacher or another learner had said.

The lessons could not be said to have greatly enhanced children's geographic knowledge or skills. In the first lesson, the teacher's description of climatic processes was weak and confused. He spoke about the sun moving and rainfall as being linked to temperature without mentioning any other factors, which influence rainfall. The use of mapwork and location was weak as the teacher used sketch maps on the board although he had a printed map at the back of the classroom. The lesson on Lesotho constituted a list of a few things viz. mountains, agricultural products, exports and towns. There was no attempt to build up an understanding of relationships between, for example, the relief and types of possible farming or types of agricultural products and exports. The children's ability to name towns and mountains indicated that some of them had visited Lesotho but the teacher did not exploit this in his lesson.

There was no progression of concept development and the order in which facts were presented tended to be disorganised. No attempt was made to engage children's interest. Children were simply expected to give names, repeat at various points what the teacher said and say 'yes' fairly frequently in agreement to statements made by the teacher. If the children gave the wrong answer, the teacher was sometimes insulting saying things like, 'Some of you learn to forget.' or 'Don't you know anything about Lesotho?'

4.3.3 The texts and the lessons

The teacher gave no new information other than to include Botswana, Swaziland, Namibia, and Lesotho in his list of neighbours, their capitals and a few rivers, which act as borders. The first lesson on temperature contained errors that we have mentioned. In the other lessons there were a few spelling errors e.g. Letseng la terae was spelt as Leseteng la terai. The information which the teacher omitted was often that which would have added coherence to his lesson e.g. information about daily life and climate.

4.3.4 Teaching and learning aids

The teacher used the blackboard exclusively. On this he drew sketch maps and diagrams and wrote up key words and lists. There was nothing for the learners to do other than to listen and answer questions orally except in the last lesson when the teacher gave them some questions to answer in their books.

4.3.5 Assessment

The teacher only gave one exercise for the children to do. The children wrote down the answers only. The teacher went over these orally in class and checked the children's books while they were doing corrections.

4.3.6 Language use

The teacher used English almost exclusively although a few Sotho sentences were included but not in any regular way. Instructions were given in Sotho. The teacher had some difficulty in expressing direction in English e.g. 'Which desert do you find in south of Africa?'

4.4 Learner performance

4.4.1 Classroom responses

It is difficult to assess what pupils gained from the lessons as very low level demands were made of them. Responses required focused on their ability to remember isolated facts - they were never called on to give explanations and this concentration on isolated facts resulted in pupils becoming confused. In the revision section of Lesson 3, the teacher asked pupils to give the names of South Africa's neighbours. Pupils made many errors, naming Sweden, South Africa, Pretoria and Zaire. Learners were unable to distinguish between continents, countries and towns and had difficulty expressing direction.

4.4.2 Classwork books

There was very little work in their classwork books. The work we saw tended to be one-word answers indicating that learners' reading and writing skills are not being developed, neither are their graphicacy skills. Like children in the other classes we visited, these learners are left with only decontextualised words with which to do revision.

TEACHER 5

5.1 Background

This teacher uses the work programme - a document from the Education department - when he prepares his lessons and probably honestly says he spends 10 - 15 minutes doing so. He uses different textbooks, including *Active Geography* of which the school has class sets. These were used occasionally during the lessons. He uses mainly English although in the lessons we observed, he taught the second two lessons in Sotho.

He feels that children learn best through the play-way method, using concrete objects in the classroom, through exploration, by explaining in the language of their choice. He says he implements his beliefs by bringing relevant materials to the classroom but we saw nothing like this in the lessons we observed. He says he deals with faster learners by giving them more challenging work and slower learners by getting them to work with faster learners.

He uses the textbook and maps as resources in the classroom. He also uses the chalkboard. As at the other township schools, there is a photocopier but it is used for teacher materials only. He claims to spend 5 minutes working with individuals, 10 minutes working with groups and 15 minutes working with the whole class but we only observed whole-class work, with individual tasks being set at the end of the lesson. He says he uses learner participation in class and oral questions, as well as formal tests, to assess his learners' progress.

He enjoys teaching Geography as it teaches children about reality and how nature affects them. His biggest problem is that the teacher/pupil ratio is too high and there is a lack of different textbooks and reference materials. He feels that this would be overcome if schools had well-equipped libraries and fewer children in the classes. He feels the Education Department could support teachers with different, relevant textbooks and reduce the teacher/pupil ratio.

5.2 Lesson topics and texts used

Lesson	Topic	Text
Lesson No. 1	Seasons	<i>Active Geography, Std 4</i> " The teacher uses this text because it is the only one available at the school. He feels that it is too difficult for the pupils to use on their own.
Lesson No. 2	Temperature " The teacher chose to teach this lesson in Sotho to see what response he received from the children. He felt that they were more relaxed and more responsive.	<i>Motjheso le mohatsela</i> He felt that there were some small grammatical errors in the text - as well as an error in an example they gave of telephone wires - where the hotter it is, the more they droop and the colder, the straighter they are. It seems that the illustrations had been mislabelled. However, the teacher found the examples which they gave useful.
Lesson no. 3	Weather & climate	<i>Wild, wet and windy</i> " The teacher liked the illustrations although he did not show them to the pupils. <i>Boemo ba lehodimo</i> He found it useful to have texts in both languages as it helped to explain words in English.

5.3 Comparison between the lessons

5.3.1 Introduction

The teacher made the aims of the lessons clear in the second two lessons we observed. The strength of his teaching lay in his ability to establish relationships between different processes - thus, to some extent, the idea of the seasons being linked to the relationship of the positions of the sun and the earth were established although they were not fully explained as the basis for understanding this relationship lies in the axis of the earth which he omitted from his lesson. In Lesson 2, the effects of hot and cold were clearly explained - the teacher used a discovery approach by asking to children to explain phenomena such as how boiling water could break glass, before giving them an explanation. In his third lesson he did not only teach the difference between climate and weather but linked them to the seasons which he had taught in the first lesson which we observed. This teacher showed an ability to establish links between different phenomena to a greater extent than the other teachers did. The ideas/concepts that he presented were well organised. He always started with what the children already knew or could observe in their daily environments. The teacher did not make links across the curriculum.

There was a change in the spread of the type of questions that the teacher used over the three lessons. In the first lesson, his questions mainly required data-recall or yes/no answers. The second two lessons included more observational questions and questions requiring explanations.

Like the other teachers, this teacher paid little attention to the children's attitudes although there was a very participatory atmosphere in his classroom even though he was strict and impersonal with the children.

5.3.2 The text and the lesson

The teacher tended to stick closely to the information presented in the texts - in the lesson on temperature, however, he did examine things that brought heat and cold. There were a few errors e.g. the teacher stated that the work of the tropics is to determine the seasons. He also omitted the role of the axis of the earth, which resulted in his explanations of seasons being rather superficial. The lesson on weather and climate we felt could have caused confusion in that there was no distinction between what brought about weather changes and what constituted different kinds of climate.

5.3.3 Teaching and learning aids

The teacher used the chalkboard exclusively. He had an advantage over the other teachers in that he was able to draw more fluently and that his diagrams were more accurate than the others were.

5.3.4 Classroom organisation

He taught to the whole class, concluding every lesson with a task, which was individually completed. These tasks constituted the consolidation of his lessons, as he did no oral revision other than to mark the exercises set in class.

5.3.5 Assessment

The teacher did not seem to use the classwork exercises for assessment although he did check the children's books once they had marked them themselves.

5.3.5 Language use

The teacher taught the first lesson in English with a very clear distinction being made being work and communication with the children. All communication with the children was in Sotho and all work was in English. In the other two lessons, the teacher experimented with Sotho which led him to say that the children were more active in class.

5.4 Learner performance

5.4.1 Oral responses

The level of demand on the children shifted over the three lessons from data-recall to questions requiring observational or explanatory responses. The children were able to make clear observations about temperature based on their everyday experience although one child said dust affected weather. Areas of difficulty lay in their inability to name the tropics and their position and to express direction. Revolution seemed to be term which they found difficult.

They were unable to explain why a glass broke although the teacher allowed a few children to try before he gave them the correct explanation but some children could clearly explain why telephones wires droop when it is hot. This, unfortunately, was contradicted by the teacher who stuck to the error in the text.

5.4.2 Written work

The learners wrote some answers in full sentences although other questions simply required lists and this is what the children gave without saying what they were lists of. The most worrying problem was that after the lesson on the difference between weather and climate, children were still confusing the two concepts.

TEACHER 6

6.1 Background

This teacher says she uses textbooks (she didn't specify what kind) and the work programme when she prepares for class. She collects materials for herself from magazines and anything else which might be useful. She uses English but often teaches in Sotho when the children do not understand. She says she spends 25 % of her time in Sotho but in the lessons we observed, it would seem that she spends more time in Sotho than in English. She is unclear about how she thinks children learn best but says she tries to get children to learn on their own. How they do this is unclear as the children have only rudimentary notes in their books and no textbooks.

She says that she does not have time to help slower learners so they get neglected although she says she gives faster learners work to do on their own. We saw no evidence of this as the teacher seemed to teach the whole class all the time and says this is the type of classroom organisation which she prefers. She also feels that it is more important that children apply information rather than simply recall it but again there is no evidence of this in her practice. Assessment is based on work completed in class, oral questions and formal tests. She teaches from notes on the blackboard. The school charges 10c a page for work copied so it is too expensive to give children worksheets. She says she does not like teaching Geography as there are not enough textbooks and maps. The fact that the textbooks are out of date is her biggest problem. She would like to attend refresher courses run by the department. She feels

positive about Curriculum 2005 but feels that the sizes of the classes need to be reduced so that the teachers can use group work.

6.2. Lesson topics and materials

This teacher seemed to be a rather reluctant participant in the project. We suspect that the principal told her that she had to take part. This resulted in her not using Sotho material at all. However, we have included our observations in her classes. While they do not help in understanding the effect of the use of Sotho material, they do contribute to developing an understanding of classroom practice.

Lesson	Topic	Material
Lesson no. 1	Provinces of South Africa	a map produced by Metropolitan Life Insurance Co.
Lesson 2	Maize farming	nil
Lesson 3	Mining	<i>Explore your province</i>

6.3 Comparison between the lessons

6.3.1 Introduction

This teacher introduced every lesson by stating what the children were going to learn. She was one of the few to introduce the researcher to the class and to explain to them what she was doing there. The lessons on the provinces made it difficult for the teacher to draw on the children's own experience but she drew on their experiences extensively in the lessons on maize farming and mining. The teacher presented her material in an well-organised way although there were a few instances of her jumping from one topic to another and then back again.

The second lesson on maize farming was not linked to work previously completed but in the lesson on the provinces, she brought in rivers which she had taught in a previous lesson and in the lesson on mining, she made the children refer to the provinces which they had learnt. The teacher did not make consistent links with other areas of the curriculum other than to make the children do some addition in the first lesson.

6.3.2 Body of the lesson

The teacher employed a question-and-answer style of teaching but spiced this up with wonderful dramatic improvisations, which caught and held the children's attention. She acted out the noises made by various machines and the actions done by both farm and mineworkers. The teacher used maps to teach both the provinces and mining. In the lessons on maize farming and mining, she established links between what the children were learning about and their own lives e.g. maize is grown so that we can eat it; people mine - mines give work. She also dealt with processes such as the farming cycle and what happens between the mines and our homes i.e. the products of the mines go to factories, then to shops where we

buy them. In the lessons on the mines and farming, people and respect for the work, which they do was strong.

In second and third lesson the teacher drew strongly on the children's own observations and knowledge. Children asked their own questions - the only time we witnessed this happening - one child asked why farmers pay workers in winter - and gave their own observations - one child quite rightly pointed out that there are very few people living and working on farms nowadays.

The teacher still asked mainly data-recall questions although there was a greater range of questions including children making observations and giving explanations. In the last lesson the children were required to synthesise the information given during the lesson.

6.3.3 Text and the lesson

In the first lesson the teacher used the Metropolitan Life map as her source of information. It was problematic in that it did not include a list of up-to-date premiers so she simply omitted their names but pointed out which premiers had changed except for the Free State and Gauteng premiers. In the second lesson, the teacher who was born and bred in Viljoenskroon and therefore knew a lot about maize farming, drew on her own knowledge. In the third lesson she used the information supplied by *Explore your province* although she included much more than the book contained.

6.3.4 Teaching and learning aids

The teacher used printed maps. She drew diagrams and wrote key words up on the board. She also used mind maps to illustrate the products of maize. She taught to the whole class in all the observed lessons.

6.3.5 Consolidation and assessment of work

This teacher's weakest point was the consolidation of new work. She said that she normally taught Geography twice a week - one lesson was an oral lesson and one lesson was for writing. We attended only the oral lessons but judging from the children's books, not much writing had been down- only a listing exercise from the lesson on provinces.

6.3.6 Language usage

This teacher seems to use mainly Sotho in class although all new terms are taught and written on the board in English.

6.4 Learner performance

6.4.1 Oral responses

The children were able to answer most of the questions which were asked which required that they give information or use observations drawn from their everyday lives. Errors which occurred included:-

- ✍ factual errors - saying that Gold Reef City is a gold mine, not being able to say where there is a desert, Welkom produces diamonds;
- ✍ naming errors - not being able to say in which province they live, confusing towns, countries and provinces;
- ✍ observational problems - learners couldn't say when maize is planted, they said it rains a lot in the Free State and that diamonds are used for money.

6.4.2 Classwork books

There was very little work in their books and the exercise they had done required that they simply match and list capitals and provinces so it was impossible to judge how much the children had gained from their lessons.

TEACHER 7

7.1 Background information

Teacher 7 teaches Grade 7's at an afternoon school. She prepares her lessons by making notes from textbooks supplied by the school. The books that she prefers to use, are *Successful Geography* and *Active Geography*. She estimates that she spends about 15 minutes preparing for a lesson. Although the school's language policy is to use English as a medium of instruction she uses Sotho to help the learners when they do not understand.

She feels that children learn best when the lesson is taught in their home language and they become involved in the process of learning. She says that she prefers to teach in English and then repeats material in Sotho when she realises that the learners do not understand. This practice was confirmed in the lessons observed. She says she deals with fast learners by giving them additional work and spending more time with slow learners. She feels that group work is the most effective method of teaching but we never saw any evidence of this. All observed lessons were teacher directed. Based on evidence obtained during the class visits and the children's work books, it seems that the teacher tends to teach new material for one period (25 minutes) and then give the learners an activity to do during the following lessons.

7.2 Lesson topics and materials used

Lesson no.	Lesson topic	Materials used in preparation
Lesson 1	Different types of transport	<i>Active Geography, Std 5</i>
Lesson 2	Transport continued	The teacher used material from <i>Ho eta naheng</i>. She copied pictures from the handout and led a question answer session based on the pictures. Teacher feedback: Enjoyed using the material because she found it easier to understand and there were a lot of examples for her to use in the lesson. She found problems with some words, which were difficult in Sotho.
Lesson 3	Transport between countries	Map copied from <i>Living Geography Standard 5</i>. No Sotho material was selected. Teacher feedback: She felt that the learners were able to see how different kinds of transport could be used to transport goods between countries.

7.3 Comparison between lessons

7.3.1 Introduction to the lesson

The teacher introduced the main topic, transport, at the start of each lesson. However since all lessons dealt with transport, she should have made clear the specific aims of each lesson. Lesson 1 and 2 did not seem to deal with different topics at all. In both of these lessons the teacher used a question-and-answer method to draw information from the learners about what they knew about different forms of transport. Personal links with the material were made by asking questions about how the learners travelled to school or to other parts of the country. The main aim of the set of lessons seemed to be for learners to match transport types with the appropriate transport networks i.e.: cars on roads, trains on tracks but this were not made clear in the introduction.

7.3.2 The body of the lesson

In Lesson 1 the teacher focussed on the types of transport that the learners would use to travel between various points and the network that would support this form of transport. In Lesson 2 the learners identified different types of transport represented in pictures which the teacher had copied from *Bala O Ithute*. In Lesson 3 the teacher led a question-and-answer lesson that was focussed on a map, copied from *Living Geography*.

All of the lessons were teacher-centered, question-and-answer sessions. All of the lessons lacked structure and the teacher hopped between trying to deal with the link between distance and mode of transport, and transport networks and appropriate mode. The material and activity selected for Lesson 3 had great potential for a learner-centered lesson however the teacher tended to speak even more during this lesson than lesson 1 and 2.

The teacher's approach tended to focus on information transfer. Most of the lessons were spent identifying and naming objects related to transport. The teacher did not extend learner geographic knowledge at all in Lessons 1 and 2. She made statements during these lessons that confused the general concepts, which she should have been teaching, for example, how distance influences the mode of transport, which a user selects. She made the following statements during the lesson: "It is possible to go to Durban by a bicycle, a racing bicycle" and "You can catch a plane to town, a helicopter". These sorts of statements, although possibly true, do not help the learner to form a clear understanding of the relation between distance and mode of transport, which she was trying to teach. Lesson 3 involved the use of a map and provided an opportunity for learners to develop their map interpretation skills however the teacher led the discussion and thus determined the pace of learning. Any opportunity for self directed-learning was lost. No attention was paid to the learners' affective domain during any of the lessons.

7.3.3 The text and the lesson

In all of the lessons observed the teacher gave significantly less information than was contained in the texts. Most of the interesting content and structure were omitted and the lesson tended to focus on the learners' own experiences exclusively. In Lessons 2 and 3 she extracted only the visual images from the text which included pictures of various modes of transport and maps. These were enlarged and reproduced for the class. Although the teacher said that she had enjoyed the new ideas in the Sotho text, there was almost no reference made to the material in the texts during the lesson.

Lesson 3 was the most disappointing, as the teacher seemed to have misunderstood the map, which had been extracted from the text for use in the lesson. The teacher spent most of the lesson identifying the features represented on the map, for example, the cities, mountains and modes of transport. Little attention was paid to products and mode of transport, which were depicted on the map. She concludes, rather confusingly, by saying, "Transport can be utilised to transport whatever you want to transport". The activity in the textbook had been designed to show learners that different products are transported by different means depending on variables such as bulk (sugar) or freshness (flowers). The teacher did not use the activity suggested in the textbook.

7.3.4 Teaching and learning aids

The teacher used the chalkboard to write down key words during the lesson. New words or difficult terms were written down in English and then discussed in Sotho. In Lesson 1 the teacher set up a table, which listed the medium of transport and the mode of transport, on the board, which she completed by asking the class to give her appropriate answers. Board work tended to be disorganised as words were written down at random.

In Lessons 2 and 3 the teacher used the pictures as a teaching aid. The handouts in Lesson 3 were copies of a map and key. There was no heading or activity on the handout. The class was not instructed to keep or use the material at the end of the lesson.

7.3.5 Consolidation of new work

The teacher did not summarise the new material, which had been dealt with in the lessons. She concluded the periods by asking the class if they had understood and whether there were any questions. The class was not given any work to do during or after the lesson. However, an analysis of the learners' books shows that the class was given work to do later, which dealt with the material covered in the lessons observed. These tasks involved listing the types of transport used on different mediums. Learners were not expected to use higher order cognitive skills.

7.3.6 Assessment

The teacher collected the learners' books periodically and marked them out of the classroom. Pupils were expected to correct all mistakes made. Selected tasks were used for a general assessment of learners' abilities.

7.3.7 Language use

The teacher used mainly English in all of the lessons. She tended to repeat herself in Sotho as soon as she realised that the learners had not understood her. All notes were made in English. During feedback the teacher said that although she used Sotho to help the learners during the lessons, she felt that there were problems with geographic terms in Sotho and that these were difficult for the learners to understand.

7.4.1 Classroom responses

The learners spent most of the time in the classroom listening to the teacher or answering the teacher's questions. The content of the lessons was not particularly difficult and the learners were able to answer almost all of the questions. The question and answer sessions were not well managed and the class tended to shout out responses rather than the teacher selecting whom should respond.

7.4.2 Classwork books

An analysis of the learners' books shows that they are given between two and three pieces of work to do a month. Learners' work is not always recorded clearly. At times only the answers to questions set by the teacher are provided. This is surely confusing to the learners when they prepare for exams.

Most of the work in the books involves supplying single word responses to questions. When learners are asked to construct their own sentences, the quality of English used is extremely poor. No corrections are made to grammatical errors. Frequently the questions are vague and almost any response could be considered to be correct.

TEACHER 8

8.1 Background information

Teacher 8 taught Grades 4, 5 and 6 at the same school as Teacher 7. He has been teaching for five years, has a teaching diploma and has attended no inset courses. Lesson preparation takes him about 30 to 45 minutes and he uses textbooks available at the school. The school has the following copies available for teachers: *Active Geography*, *Geography to the Point*, *Modern Geography*. He also makes use of the library in Zamdela and the Teacher's Center sponsored by Sasol and other industries in the area.

He says that he teaches mainly in English and uses Sotho where necessary to help learners who do not understand. We found this to be true during our observations. This teacher used Sotho approximately 25% of the time in the classroom. He believes that most effective learning takes place when he relates difficult concepts to words that they know and are familiar with.

The school has textbooks and the teacher has access to duplicating facilities. We did not see the teacher use any of these resources during the observed lessons. Although the teacher claimed that he used group work and that the learners spent approximately 10 minutes of a lesson completing tasks on their own, we did not witness this at all during the three observed lessons.

The teacher is enthusiastic and has an excellent classroom manner with the learners. He says he enjoys teaching Geography, particularly telling the learners about the natural environment and processes such as the formation of rain. He finds that learners struggle to understand difficult concepts like rotation and revolution. He also finds it difficult to deal with mixed-ability teaching situations because the classes are too large. There were more than 60 learners in all of the observed lessons. He feels that the classes should be made smaller and that learners should be grouped according to their abilities. He believes that he will not be able to introduce more learner involvement as outlined in Curriculum 2005 because of the over-crowding in his classes but he feels optimistic about the new curriculum.

8.2 Lesson topics and materials used

Lesson No.	Lesson topic	Material used
Lesson 1	Provinces of South Africa: Introduction	<i>Active Geography, Std 2</i> The teacher used the text to prepare but did not refer to the text during the lesson at all
Lesson 2	Provinces of South Africa: Northern Province and Mpumalanga	<i>The Northern Province sebaka se makatsang</i> and <i>Mpumalanga Entle</i> The teacher said that he had found lesson preparation from the Sotho material easier because the language was easier to understand and there were more interesting points to include in his lessons
Lesson 3	South Africa: population	<i>Living Geography, Std 2</i> The teacher chose to use the material from this text because it is clear and easy for the learners to understand. He also liked the fact that it included a list of skills to be developed and provided up-to-date geographic information

8.3 Comparison between three lessons observed

8.3.1 Introduction to the lesson

The teacher informed the learners about the topic of the lesson in all three lessons. This was usually a reference to the topic of the content but he never referred to the skills or purpose of the lesson. In the first lesson the teacher revised ideas from the previous lesson but did not do this in the following lessons. In all of the lessons the teacher made excellent links with learners' own experiences, particularly Lessons 1 and 3. In order to explain the division of the country into provinces, the teacher drew an analogy between the division of the township into sections and then explained that the country also had to be divided up in a similar manner. The teacher did not explain why the country was divided into provinces.

The teacher did not attempt to explain the location of the provinces in South Africa. The teacher did draw a poor map of South Africa on the board to help the learners understand the division of the Cape into Eastern, Northern and Western Cape but did not use a map to teach the other provinces.

8.3.2 Body of the lesson

The question-and-answer method was used exclusively during all lessons and the learners sat passively waiting to respond to the teacher's questions. Most of the questions asked in the lesson were either of the attention-checking, naming or data-recall type. Information transfer remained the key focus throughout and learners were never encouraged to operate in the affective domain.

In Lesson 1 the teacher explained the concept of provinces and proceeded to draw the names of all of the nine provinces of the country from the learners. He then moved on to discuss key points about the Free State, Gauteng and Western Cape. When the teacher had established what he thought was an important point to remember, he made the class repeat it a number of times whilst reinforcing the fact by writing it on the board. In Lesson 2 the teacher discussed the Northern Province and Mpumalanga. Besides the information about the provinces, the

only geographic concept that the teacher taught was what a waterfall is. He did this by referring to a waterfall that the learners knew of near Ficksburg and then explained that the waterfall existed there because there were mountains in the area. Lesson 3 introduced the learners to key concepts related to population issues in South Africa such as migration and urbanisation. During this lesson the teacher spent most of the time explaining the terminology used in this section of work. This lesson was structured more clearly than the other two.

8.3.3 Text and the lesson

The teacher only used the basic information contained in the texts. He did not add any additional information to any of the lessons besides the introduction of material which related to the learner's own experiences. A most important omission was the lack of maps to locate the provinces that were being discussed. An analysis of the learners' books showed that although some of the learners had stuck maps of the provinces into their books they were never expected to learn the location of the provinces. This is a most serious omission in geographic education.

Lessons 1 and 2 were poorly structured. An analysis of the lesson shows that the content selected by the teacher was random. The text considers important geographical information such as the physical location of the provinces, the people, important places, and the economy, political relations and cultural phenomena. Most of these were not discussed at all or, if they were, only in the briefest detail.

In the lesson based on the Sotho material, the teacher made a number of important errors, which indicate that the teacher had not understood the material clearly. For example, when discussing the Northern Province he said that most people are farmers and that the black farmers have their own land there. This is grossly incorrect. The text in fact mentions that most of the wealth in the province is concentrated in the hands of a few, some of the wealthy people are the white farmers who own large farms. He also said that the Northern Province was a rural area in the past, just like QwaQwa. The text actually refers to the large number of "homelands" that had made up the province in the past. When one of the learners said that a waterfall is a river, he said that it is not. Technically the learner was correct and the teacher should have explored the idea with the learner in order to develop the understanding of the concept fully. The teacher's inability to process and use the textbook reflects a seriously inadequate understanding of the political and physical geography of South Africa.

An analysis of the lessons shows that the teacher's geographic knowledge does not allow him to select appropriate material to include in his teaching or to structure the material into suitable learning experiences, even when the material is presented in Sotho.

8.3.4 Teaching and learning aids

The teacher did not make use of any teaching aid apart from the chalkboard. The map that he drew on the board was such a poor representation of the country that it did not serve the intended purpose. No other teaching aids were used during the lessons besides showing the class a picture of a waterfall in Mpumalanga from the Bala O *Ithute* extract.

8.3.5 Classroom organisation

The average classroom size in all of the lessons observed was over 60. The classroom was organised in rows in all of the lessons. There were usually a few learners who had to share chairs. The large number of learners was obviously one of the factors, which influenced

classroom organisation. The teacher had mentioned this as a problem during a feedback session.

8.3.6 Consolidation of new work

Towards the end of each lesson the teacher would summarise the main points that had been covered and ask a number of questions in order to check the learners' understanding of the key aspects of the lesson. The teacher never gave the class any activity to complete in order to consolidate their learning during any of the observed lessons.

8.3.7 Assessment of work

The tasks set required that the learners list the names of the provinces and answer short questions associated with the lesson. The teacher then marked the activities and marks allocated were used towards the continued assessment mark of the learners. Learners are expected to correct any mistakes made.

8.3.8 Language usage

The teacher used English predominantly during the lessons but would switch to Sotho to assist learners who had not understood. During the feedback session he said that the learners had grasped more in Lesson 2 than normally and he felt that the learners' memory of the content was better. He also said that the learners had found the lesson more interesting. There was some language interference when the teacher asked the class to explain what a waterfall is. One learner thought that he was referring to a fool not a fall (*Ke Sephogo*).

8.4 Learner performance

8.4.1 Classroom responses

Due to the exclusive use of the question-and-answer approach and the emphasis on content, the lessons did not encourage the learners to move beyond the level of data recall and naming. The teacher did not manage the questioning session well and the learners were allowed to shout out. Learners who did not understand were not identified and there was no opportunity for them to learn at their own pace.

A serious flaw in the learners' understanding of the concepts (province and country) occurred at the start of Lesson 2. In response to the question, "Name the capital of the Northern Province?" the learners said South Africa, the teacher said no and repeated the question. No attempt was made to address the misconception held by the learner at all.

8.4.2 Classwork books

An analysis of the learners' books showed that they had not completed many activities during the year (less than one per month). Work that had been completed was marked regularly. The tasks set tend to demand one-word responses and often the learners do not copy the question down so all they have is a list of words from which to learn. There is no attempt to develop learners' ability to write about Geography in English. Learners seem to make a lot of mistakes with punctuation, particularly the use of capitals. These are not corrected at all.

TEACHER 9

9.1 Background information

Teacher 9 has a teaching diploma and a Further Diploma in Education (Remedial Education). He teaches Geography to the Grade 6 classes at the school. He says that lesson preparation takes him a day or two, but less time if he has taught the section before. Resources used include the textbooks at the school and materials obtained from the library.

The teacher's classroom language policy is to use English but he uses Sotho to help the learners understand difficult terms. He believes that the best learning takes place when the learners are engaged in the lesson. He does this by asking questions during the lesson and giving them assignments and homework. Projects and assignments are also used to encourage active learning. The teacher marked the activities and marks were allocated and were to be used towards the continuous assessment mark of the learners. He says that he uses group work but we did not observe this mode of organisation during any of the observed lessons. Slow learners are dealt with by arranging co-operative learning groups. This was also not observed during the observed lessons. Each learner has a textbook and the teacher supplements this by handing out duplicated material.

The teacher enjoys teaching geography, particularly mapwork and is excited about the opportunities offered by Curriculum 2005.

9.2 Lesson topics and materials used

Lesson No.	Lesson topic	Material used
Lesson 1	Important issues in Africa: resources	<i>Geography to the Point, Std 4</i> There is not much detail in the textbook on this topic. We believe that the teacher also made use of notes issued by the Education Department as a supplement after the introduction of the Interim Curriculum
Lesson 2	Direction	<i>Ho Fumana Tsela</i> The teacher did not use much of the material in the article at all and no use was made of the suggested exercises
Lesson 3	Urban and rural issues	<i>Living Geography, Std 4</i> The teacher supplemented the material from the textbook by giving the learners pictures to discuss in groups

9.3 Comparison between the lessons

9.3.1 Introduction to the lesson

In all three lessons the teacher made the aim of the lesson clear. Lesson 1's introduction was particularly good because the teacher stated clearly what the content would be and why it was important to study the topic. He also explained key words, which would be used in the lesson. He followed a similar format in Lesson 2 and 3.

No reference was made to previous lessons during the introductions and there was no attempt to link the lessons to other areas of the curriculum however the teacher was able to draw on learners' own experiences to some extent. He did this through questions, which tend to be superficial, as they did not require much thought.

The class was divided into groups of four or five for Lesson 2 and 3. This was possible because there were about 35 learners in each of the lessons. There was enough space for the learners to move about and rearrange the furniture.

9.3.2 Body of the lesson

The lessons were presented in question-and-answer style with the teacher dominating most of the discussion. At times, particularly in Lesson 1 and 3, the lesson lapsed into lecture mode. In Lesson 1 the teacher discussed water, forestry, soil and minerals as important resources in Africa. Little information was conveyed besides mentioning the resource and its uses. There was ample potential here for the teacher to encourage the learners to discuss the conservation of these resources and inequalities in the distribution of resources in Africa one of the reasons why this content was introduced into the Geography curriculum.

In Lesson 2 the teacher revised the four cardinal points of the compass. This is inadequate as the syllabus requires that the learners should be able to use eight cardinal points by Standard 4 (Grade 6), however the material from *Bala O lthute* only dealt with four points. The teacher introduced the cardinal points by relating them to Sotho words. This was interesting information, which had been drawn from *Bala O lthute*. Although the class had been divided into groups, no group work was done and the whole class participated in a question-and-answer session on direction led by the teacher.

The class was also divided into groups for Lesson 3. Each learner was given pictures of urban and rural areas, which they referred to while the teacher asked questions to help the learners develop an understanding of the differences between the areas. The pictures were not all appropriate and some showed stereotypical images or images which could confuse learners.

The lessons focussed on content and information transfer. Generally the information was presented by discussing facts systematically however the information on resources was poorly structured. None of the lessons developed the learners' attitudes or encouraged critical thinking. There was little skill development and learners were not given support to develop their visual literacy. In the lesson on resources the teacher mentioned the misuse of water and problems associated with soil erosion. This was a beginning towards introducing empathy into the lesson but the issues were not explored and learners were not encouraged to give their own ideas.

9.3.3 Text and the lesson

The teacher did not refer to content in the text at all, rather he used the supplementary notes supplied by the Department of Education. Generally the lessons tended to be superficial and the content taught was not well structured. Not much new information was supplied in the lesson and it tended to be content which directly related to the learners' lives. Important geographical concepts related to urban and rural issues such as push and pull factors, which encourage people to move to or from cities were not dealt with at all.

Although a number of suitable activities were included in the material, particularly in the lesson in Bala O *Ithute*, the teacher did not use them but designed his own. In the direction activity the teacher ignored the notation for North on the picture which he was using and told the learners that they should take the school as North. This was a problem as one of the conventions, which the teacher should have been teaching the learners, is that when studying maps, North is always be at the top of the page.

9.3.4 Classroom organisation

The class was divided into groups in Lesson 2 and 3, however the lessons took the form of whole class teaching despite the arrangement of the desks.

9.3.5 Assessment

No activities were given to the learners during Lessons 1 and 3 but a review of the learners' books shows that they were given classwork regularly and that the teacher marked their work regularly.

In Lesson 2 the learners were given a task to complete. They had to copy a simple sketch into their books and provide the direction of one point from the other. The work was marked in the class.

9.3.6 Language

The teacher's language policy was to use English as a medium of instruction. He said that he did use Sotho to reinforce points that the learners had not understood. This was confirmed in the lessons observed.

9.4 Learner performance

9.4.1 Classroom responses

Learner contributions in the classroom tended to be simple, one-word responses to the teacher's questions. There were not a lot of questions and the teacher dominated most of the classroom interaction. Because of the elementary level of the content, the learners did not make many errors.

9.4.2 Classwork books

It was disturbing to note the inappropriate facts, which the teacher had taught in a lesson on the "Pygmy" and "Bushmen" people. The workbooks reflected the following statements, which had been marked correct: "They dance and sing in the evenings" and "Their buttocks are big". This sort of information is inappropriate and suggests an old racist approach to the teaching of the geographies of people and regions. This seems to be the result of the information contained in some of the texts used at the school.

TEACHER 10

10.1 Background

Teacher 10 has been teaching for ten years. He has a junior primary teaching diploma and has not attended any additional courses. He teaches Geography to the Grade 7s at the school. English is used mainly during the lessons but he does use Sotho to support learners who do not understand. Approximately 10 minutes are spent in Sotho during a lesson. This was confirmed in the observed lessons.

The teacher prepares his lessons by reading the textbook and making notes. He says that he spends about one to two hours on preparation regardless of whether he has taught the lesson before. He uses *Active Geography* (which he purchased) and *Geography to the Point* (supplied by the school). He also uses pictures from newspapers and magazines. Learners are sometimes given additional material that the teacher has duplicated. Classwork and take home assignments are used to reinforce learning. This was confirmed in the observed lessons and the learners' classwork books.

He believes that learners learn best when the teacher uses many teaching aids, which should be prepared, before the lesson begins. Fast learners are given additional work to do and learners who learn more slowly are given extra lessons.

Whole class teaching makes the teacher feel most comfortable and he spends most time doing this because his classes are large (approximately 58) and he says that it is difficult to manage the class when using another approach.

10.2 Lesson topics and texts used

Lesson No	Topic	Material used
Lesson 1	Telecommunication	<i>Active Geography, Std 5</i> The teacher sticks closely to the content and provides some additional information.
Lesson 2	Transport	<i>Ho eta naheng</i> The material is not appropriate because it is too easy for the grade 7s The teacher felt that the material was easy for him and the learners to understand but that it should be used in conjunction with the textbooks
Lesson 3	Trade in Africa	<i>Geography to the Point, Std 5</i> The teacher sticks close to the facts in the textbook. Additional information provided by the teacher was frequently incorrect

10.3 Comparison between the three lessons

10.3.1 Introduction

In all of the observed lessons the teacher explained clearly what the lessons would be about. He did this by linking the content to previous lessons, explaining new terms and then by

means of question-and-answer methods, linked the new work to the learners' own lives. The links tended to be superficial and did not really help to make the material more accessible to the learner.

10.3.2 Body of lesson

In Lesson 1 the teacher explained that in order for countries to be able to trade with each other, they need to communicate with each other. He then proceeds to discuss different forms of communication from hand-written letters through to new electronic forms of communication. Although he tries to present the information logically from the slowest to the fastest mode of communication he hopped about and the lesson came across as a disjointed bundle of ideas. In the lesson the teacher assisted the learners to interpret pictures depicting different forms of telecommunication. Lesson 2 developed these ideas by considering how countries transported goods to be traded. The teacher did not develop this lesson successfully and the links between communications and trade were lost after the introduction.

The third lesson explored trade in southern Africa. The focus was on the concept of imports and exports and the goods, which South Africa trades with other countries. The teacher helped the learners to interpret a pie diagram from the textbook.

Although the teacher said that he believed that the learners learnt best when teachers made maximum use of teaching aids he did not use any in Lessons 1 and 3. In Lesson 2 he used the pictures of different forms of transport from *Bala O Ithute*. His lessons were mostly presented as lectures with short question-and-answer sessions, which mainly checked for understanding or focused learners' attention.

There were no links to other areas of the curriculum and the teacher did not encourage the learners to think critically or empathetically.

10.3.3 Text and the lesson

In Lesson 1 and 3 the teacher stuck closely to the content of the material in the textbooks which he used and in both of the lessons the teacher asked the class to refer to the textbook. Lesson 2s content tended to be general knowledge and the teacher only used the pictures from *Bala O Ithute*.

The teacher made a number of factual errors in the lessons, for example, he explained that telecommunication was a form of sound wave rather than that it was information carried on electro-magnetic waves; that BMW stood for British Motor Works and that South Africa bought most of its computers from China and Japan.

10.3.4 Teaching and learning aids

The teacher used very few learning aids to supplement the lessons. He used the board to emphasise some of the points made during the lesson. The teacher made use of diagrams in the class textbooks during the lessons and made enlarged copies of the pictures from *Bala O Ithute*. No use was made of maps.

10.3.5 Classroom organisation

There were approximately 52 learners in the class during each of the observed lessons. The teacher says that the large number of learners makes it impossible to use group work and so he tends to do whole class teaching.

10.3.6 Consolidation of new work

The teacher gave the learners work to do at the end of each *of* the lessons. The tasks usually required that learners repeat information given during the lesson. There was no skill development and the activities usually required one-word responses. Once again the learners only recorded the answers and not the questions.

10.3.7 Assessment of work

Learners work was marked regularly by the teacher and the learners corrected their mistakes. Marks were allocated to some *of* the activities and these were used for the learners' year mark.

10.3.8 Language use

The teacher used predominantly English during the lessons. He only used Sotho in a few instances when learners had not understood something.

10.4 Learner performance

10.4.1 Classroom responses

Learners were expected to sit quietly for most of the lesson. Every now and again the teacher would ask questions to focus the learners' attention. There were no questions, which expected the learners to give explanations or think critically.

10.4.2 Classwork books

The learners were expected to complete tasks in their books regularly. The tasks usually involved one-word responses about information dealt with during the lesson. The teacher set his own questions and the tasks in the textbook were ignored.

TEACHER 11

11.1 Background

Teacher 11 taught Grade 4 and 5 classes Geography at the school. She has a four-year teaching diploma and a Further Diploma in Education and has been teaching for four years. She says that it takes her about 30 to 60 minutes to prepare a lesson. She uses textbooks, magazines and teacher journals to do this.

She follows the school's language policy of teaching in English but says that she switches to Sotho if the learners do not understand. This was confirmed in the observed lessons.

She believes that learners learn best when teachers consider the learners' prior knowledge during preparation. She does this by starting from things, which are familiar to the learner and then moving on to more difficult material. Appropriate learning aids are also important and she uses pictures from magazines, which she has enlarged on the school's duplicator. She uses fast learners to help learners who are struggling. She also offers additional help to slow learners and consults the school's remedial teacher if necessary. We did not see any evidence to support this during the observed lessons.

Generally the teacher enjoys teaching Geography because it is a practical subject and concerns the world around the learners. She says that her biggest problems are trying to

arrange excursions for the learners, most of who are unable to afford the additional cost of school outings.

11.2 Lesson topics and texts used

Lesson No	Topic	Material used
Lesson 1	Fish in South Africa	<i>Think and Learn, Std 2</i> This is a text which the teacher got from the school and used regularly for preparation
Lesson 2	Transport	<i>Ho eta naheng</i> The teacher used the material for ideas and copied pictures from the article for use in the classroom
Lesson 3	Provinces of South Africa	<i>Living Geography, Std 2</i> The text does not have much information besides a map of the new provinces. She supplemented this with her own information

11.3 Comparison between the lessons

11.3.1 Introduction

The teacher made the aims of the lessons clear in all of the observed lessons. She did this by asking learners questions, which related the content of the lesson to their own life experiences, for example, by discussing the different forms of transport that the children used on a daily basis. None of the lessons linked the new material to lessons done previously or to other areas of the curriculum.

11.3.2 The body of the lesson

In Lesson 1 the teacher used pictures in the textbook to discuss types of fresh water and sea fish that are common in South Africa. Similarly in Lesson 2 the teacher got the learners to identify different forms of transport and when one would use each. In Lesson 3 the teacher discussed the previous provincial boundaries in South Africa and then asked the learners to identify the new provinces.

The main focus in all of the lessons was content and the learners were expected to remember new information. No skills or understanding of processes was developed apart from the concept that mode of transport is linked to the distance to be travelled. The teacher used a mixture of group work and whole class teaching in all the lessons. Although she managed to get the class to work in groups, she tended to dominate most of the learning by talking all of the time and continuously prompting the activities so learners were never able to interact effectively in groups. Lesson 3 included the most successful group work activity.

11.3.3 Text and the lesson

The teacher stuck closely to the material in the textbooks in all of the lessons. She tended to provide more information, particularly by relating the content to the learners' own experience. There was not much information in the texts on provinces and the teacher mainly supplied the content.

11.3.4 Teaching and learning aids

The main aids used in the class were the textbooks. In Lesson 2 the teacher made copies of pictures in Bala O *Ituthe* and then gave one to each group to facilitate discussion. Atlases were used in Lesson 3.

11.3.5 Classroom organisation

Although there were about 44 learners in each of the lessons observed, the teacher had arranged the desks into groups and all teaching took place with the learners sitting in groups.

11.3.6 Assessment

The class was given work to complete regularly. Some of the work was done in class as well as at home. The teacher marked the books regularly and marks were allocated for some of the activities. These were used for the continuous assessment of the learners.

11.3.7 Language use

The teacher taught almost exclusively in English. She would repeat facts in Sotho only if the learners had not understood. Some instructions were given in Sotho.

11.4 Learner performance

11.4.1 Classroom responses

The teacher tended to use the question-and-answer method to encourage participation. The questions required simple yes/no answers or information about the topic. There were few errors because the questions were simple.

11.4.2 Classwork books

Learners were expected to copy down the questions and then supply the answers. Most of the questions required one-word responses and the learners were not required to write their own sentences in English.

TEACHER 12

12.1 Background

Teacher 12 taught Grade 7s at the school. He has a senior primary teacher diploma and has been teaching for 12 years. He prepares lessons by writing short notes from reference material, textbooks and atlases. It takes him about one hour to prepare a lesson.

A mixture of English and Sotho are used in the classroom. Sotho is used to explain difficult words which the teacher feels the learners do not understand. He feels that this is the best way to encourage learning in his classroom. Slow learners are best supported when the teacher uses group work. He prefers this method because the learners get an opportunity to talk. This was not observed in the lessons observed.

The teacher enjoyed using the Sotho material because it was easy for him to understand but said that there were some Geographic terms which could not be translated into Sotho. He also enjoyed using the Living Geography text and said that the language was understandable and the activities encouraged greater learner participation. He also felt that this text was helpful as it was based on Curriculum 2005.

12.2 Lesson topics and materials

Lesson No	Topic	Material used
Lesson 1	Transport	<i>Active Geography, Std 5</i> The teacher used the information in the material and followed the format used in the text book closely
Lesson 2	Provinces of South Africa	<i>Ho etela ditulo tse ding</i> This lesson was presented exclusively in Sotho
Lesson 3	The World: Continents and Oceans	<i>Living Geography, Std 5</i> The teacher found this material most accessible and incorporated the activity in the material into his lesson

12.3 Comparison between the lesson

12.3.1 Introduction

The teacher introduced all of the observed lessons by stating what the lesson would be about. He did this by discussing main concepts and providing definitions. There was no attempt to link the lesson to work dealt with in previous lessons. In Lesson 3 the teacher used a satellite image of the world from *Living Geography*. The lessons were well structured and information was presented clearly.

12.3.2 Body of the lesson

Lessons 1 and 2 focussed mainly on information transfer. The teacher used a question-and-answer approach to the lessons and all of the teaching took place in whole-class situations despite the teacher's stated preference for group work. Lesson 3, however, was much more interactive and the learners were encouraged to interact with each other before answering the teacher's questions.

In the first lesson the teacher discussed road, air and sea transport. Some time was spent discussing harbours of South Africa. In Lesson 2 the teacher used maps from Bala 0 *Ithute* to guide the discussion on the new provinces. Although the teacher expected the learners to interpret the maps, he did not give them any support in developing their map interpretation skills.

Lesson 3 was based on an activity from the material supplied. The teacher first explained the image in a picture of the world from a satellite and then got the learners to learn the names of the continents. The following activity involved naming the continents in various hemispheres. This is an excellent activity as it reinforced many aspects of Geography. The teacher then asked the learners to give the direction from one country to another.

Information dealt with during the lessons was consolidated briefly at the *close* of each lesson but learners were not given any activities to reinforce their learning. Although we asked a number of times, the teachers failed to arrange to have copies of the learners classwork books made.

12.3.3 Text and the lesson

The teacher stuck closely to the text in Lesson 1 and 2. The information presented in Lesson 2 was superficial and the reason for learning was never made clear to the learners. In Lesson 3 the teacher used the suggested activity in the textbook for the class activity.

12.3.4 Teaching and learning aids

The teacher used the board in all of the lessons to note important facts. In Lesson 2 the teacher handed out copies of a map from Bala O *Ithute*. The learners wrote down the names of the provinces on the map. A satellite image and world map was used in lesson three.

12.3.5 Language usage

The teacher used a mixture of Sotho and English in Lessons 1 and 3. Sotho was used for instructions and to repeat information, which the learners had not understood. The teacher misunderstood the instructions for Lesson 2 and taught it exclusively in Sotho.

12.4 Learner performance

12.4.1 Classroom responses

The class was expected to sit quietly and answer the teacher's questions. The questions usually required one-word data recall responses but learners participated much more in Lesson 3. When the learners made mistakes, the teacher corrected them. Learners struggled to understand the satellite image, particularly since the moon appeared on one corner of the image and the learners could not understand what it was.

12.4.2 Classwork books

We were unable to get copies of the learners' books from the teachers and no activities were given to the learners during the observed lessons.

C. MAIN FINDINGS AND CONCLUSIONS

The main intention of our research was, to establish whether-if teachers were, supplied with texts in their home language, they demonstrated more effective teaching practice, taking as given the findings of Langan (1993). In his research, Langan established that teachers found the processing of textbooks difficult and that this has a negative impact on their ability to teach Geography. In order to do this, we isolated a number of key practices which we felt constituted effective teaching. Using these, we analysed the lessons in order to assess whether, when provided with Sotho texts, teachers' practice changed and, if it did change, whether these changes included what we had defined as effective strategies. Appendix A gives a summary of the changes or lack of change which we observed in the second two lessons for which Sotho preparation materials were made available.

1. Review of changes in teachers' practice

1.1 Outcome of the lesson made explicit

None of the teachers made the outcome of their lessons explicit in that they never stated what their learners would be able to do at the end of the lesson. However, teachers did state at the beginning of their lessons what they aimed to do and we noted greater consistency in the inclusion of these statements with the use of the additional materials, which we supplied.

1.2 Links with learners' lives

Because Geography education is about teaching the learners to observe and understand the world around them, it is important that teachers link concepts taught in their lessons to the learners' lives. Most of the teachers made some attempt to link the content of their lessons to the learners' lives although this was often superficial and did not require that children make observations about what was happening around them and apply these in the classroom. Our data therefore does not suggest that there was any change in this area in spite of the fact that some of the Sotho articles contained suggestions as to how to do this.

1.3 Links with previous lessons

Our observations showed that teachers did not generally link their lessons to work previously completed. We feel that this reflects a larger problem which is that teachers' knowledge of Geography is weak thus they do not have an holistic understanding of what they are teaching, and are thus unable to, perceive links between different sections of the syllabus.

1.4 Style of teaching

All the teachers used a question-and-answer style of lesson presentation in which they dominated the interactions in the classroom in all lessons observed. Some teachers lapsed into lecture-mode presentation from time to time. When children were unable to answer questions, the teachers tended to answer the questions themselves, which they followed by requiring that learners repeat the answer in chorus a number of times. There was no significant change in the style of teaching employed by teachers in the lessons we observed.

1.5 Geography knowledge and skills

An analysis of the transcripts of the lessons confirms what we have said above, i.e. that the teachers' knowledge of Geography is weak and, as a result, they found identifying geographic skills difficult. The expression of direction and mapwork were the only geographic skills which received explicit attention in the observed lessons although even when dealing with these skills, teachers assumed that the learners could complete tasks with little or no assistance.

In terms of content, the lessons required that children retain an extraordinary number of names leading to *learning* overload and confusion as often these were taught without many contexts.

There was no significant change in teachers' ability to deal with content with the use of the additional materials.

1.6 Organisation of concepts and ideas

Generally lessons tended to lack structure. A few teachers showed an improvement in the organisation of their ideas, either in moving from simple ideas to more complex or in presenting information in clearly defined sections.

1.7 Development of learner attitudes

Most teachers gave little attention to this aspect of Geography teaching in their lessons and no change was noted.

1.8 Teachers' attitudes to learners

Our findings concurred with those of Macdonald (1990) who found that children were expected to be compliant and to listen to the teachers. Only in one instance did a child raise a question or make an independent observation, which contradicted what the teacher was saying. One teacher made the children stand if they could not answer questions and another responded to incorrect answers with sarcasm. However, we found that most teachers were approachable and friendly towards the learners.

1.9 Links with other subjects

Generally linkage was weak, both within Geography, and across the curriculum.

1.10 Accuracy of information

Most of the information contained in the lesson was correct although the teachers did make some significant errors. These included:-

- ? errors in naming places
- ? ignoring established conventions in map reading and map interpretation
- ? incorrect spelling of place names
- ? incorrect or irrelevant examples given their lessons.
- ? errors stemming from language
- ? omissions of crucial facts and information

The number of errors remained constant no matter what the medium of the preparation text was.

1.11 Selection of information

The teachers tended to reduce the amount of information provided in the texts, which they used, for lesson preparation resulting in important omissions and poor lesson structure. All personalised information was excluded. Activities, which required children to draw ^J conclusions, make things or find information by themselves, were also excluded. Articles from Bala O *Ithute* contained suggestions as to how to go about teaching certain topics in a child-centred way. These were largely ignored.

1.12 Aids other than the chalkboard

Most of the teachers noted that aids were important in teaching and learning practice, however few of them actually used additional aids other than maps although those who did, used pictures from the materials which we supplied.

1.13 Classroom organisation

The dominant mode of class organisation was whole-class teaching. Three teachers did use group work, however, when using our additional material. This may be linked to the fact that they had more material, with which to work and/or the inclusion of group work on the classroom observation schedule, which was given to the teachers.

1.14 Tasks set

The dominant style of tasks given were questions set by the teacher which required learners to write only the answers or to list information. Only in two instances children were asked to find information by themselves at home. Few notes were given. Children were never expected to write extended paragraphs on their own or to read extended texts. Furthermore, there was no obvious increase in difficulty in tasks set in the different grades. Except for the instances

noted above, no consistent change was evident.

1.15 Relationships between tasks and lessons

Most teachers' tasks covered the main points of the lesson although children had simply to regurgitate what had been said during the lesson. In some cases there was a mismatch between the lesson and the task. In some cases the exercises required answers which had not been covered in the lesson. In other cases large sections of the material covered in the lesson was omitted from the tasks. There was no consistent change observed in the tasks set by teachers in the three lessons observed.

1.16 Marking and assessment

We included assessment in our schedules, as it is an area of important change in Curriculum 2005. We were unable to establish how assessment was carried out and, as it was not a main focus of our research, we did not follow this up but have recorded simply what we observed.

Generally the learners' classwork was marked regularly. Teachers in the Viljoenskroon district tended to mark work in class while teachers in the Sasolburg district tended to mark books out of class. All learners are expected to correct errors although this entailed learners simply writing down the correct word. We found instances of answers masked correct which were in fact wrong.

1.17 Language

We encouraged teachers to experiment with the medium of instruction so we cannot say that the language used in the lessons reflects what normally happens in their classes but rather the teachers' willingness to use Sotho. Most teachers used both languages. Learners' notes were given mainly in English. There was an instance of a teacher experiencing language interference and some of the children's answers indicated that they did not understand questions asked in English. All teachers concurred that children participated more when lessons were given in Sotho although this was difficult for us to assess on the basis of only three lessons.

1.18 Dominant form of questions

All the teachers reflected a predominance of the use of data-recall or naming questions although one teacher's questions were almost exclusively restricted to checking that the children were listening and required that they answer 'yes' only. The focus on content meant that questions were superficial and did not develop learners' reasoning skills. However, over the three lessons, there was a broadening in the range of questions asked so that questions requiring explanations occurred more frequently although this never became the dominant form of questioning.

2. Review of changes in learners' performance

Learners were not the primary focus of this study however we have analysed the oral responses given in class and the work which learners completed in their classwork books.

2.1 Learners' oral responses

The learners were able to answer roughly 56% of the questions put to them. Often children were expected to produce information which they had not yet been taught and had to draw on their own general knowledge. Language problems were obvious. Children often did not understand what was being or asked or were unable to express themselves in English.

The concentration of naming and data-recall questions in lesson, which were overloaded with information, resulted in the children confusing names and terms.

More serious problems relate to specific geographic knowledge and skills such as an inability to express direction or to locate places on maps. In terms of cognitive skills, categorisation was a consistent problem. When children were asked to explain-phenomena or terms, they usually entered into the tasks with enthusiasm, even if they could not fully or correct, explain what was required of them.

2.2 Learners' written work

We found that when children copied down work, the notes were generally correct and made sense unlike Langhan's (1993) findings with regard to children's note books. What we did observe, however, was that teachers did not give children notes very often. Learners' class-work books predominantly contained exercises done at the end of lessons or topics. In most cases, children were not expected to write down the question but gave only the answers. The result of this is that children are left with note books which are filled with lists of decontextualised words from which they would find it very difficult to meaningfully reconstruct what had been taught in lessons.

3. Conclusions

The areas in which we noted consistent change with the use of the additional preparation materials are as follows:-

- ? introductory statements as to what was to be covered in lesson
- ? the organisation of concepts and ideas improved
- ? pictures were used to introduce topics
- ? there were instances of group work being used

Although we note the above changes, we feel that this does not constitute enough evidence for us to claim that either the use of Sotho material or additional Sotho and English material impacted significantly on teacher practice. Our findings contradict the ideas that increased teacher support is one way of improving the quality of education in primary schools. Thus we feel that we cannot recommend that teacher support materials in teachers' first languages or bilingual material be made available. We feel that it may be worth investigating the impact of improved support materials for learners on the quality of learning in the classroom. However, we feel that our research has exposed other areas of concern, which should be addressed, as we note below.

D. LESSONS LEARNT AND RECOMMENDATIONS FOR FURTHER RESEARCH

1. Recommendations for the education department

Our recommendations cover four areas viz. improvement of teacher methodology, resourcing, language and improving conditions in the schools.

1.1 Teacher methodology

We feel that the most significant impact of our study has been in the detailed description of teaching methodologies currently being in use in the classroom. We feel that there are three main areas in terms of methodology, which we have uncovered, which need urgent attention.

These are:-

- ? teacher-centred methodology which focuses primarily on data-recall skills and reflects behaviourist notions of learning
- ? teachers' inability to interact with and use resource materials to greater effect in the classroom
- ? a discrepancy between what teachers say they believe about learning and how they teach.

We therefore recommend changes be made in PRESET courses and that greater attention be paid to INSET courses for practising teachers.

1.1.1 PRESET Training

PRESET courses need to emphasise a more child-centred, problem solving approach to teacher training so that children and their intellectual development, rather than content, becomes the primary focus of teaching. Trainee teachers need to develop an understanding of theories of learning and cognitive development and a link needs to be established so that they are able to base their teaching practice on their understanding of learning.

Learner-teachers need to be taught to work with a variety of resources from magazines to academic texts in order that they may learn to access information, collect it and constantly up-date what they already know.

They also need to cover learning skills necessary more thoroughly so that they are able to identify what their children are learning to do. This should include an understanding of what skills are common throughout the curriculum and which are subject specific.

1.1.2 INSET training

We feel that teachers need in-service training which will enable them to move away from their teacher-dominated question-and-answer teaching style to a more child-centred approach. This could be achieved in a number of ways, from formal workshops run by the department to subject-specific workshops run by teachers working in similar areas in which ideas for teaching and materials could be used.

In order for Curriculum 2005 to be implemented, workshops are necessary which will enable the teachers to isolate skills necessary for Geography and useful beyond the classroom. Teachers need to be involved in developing ways in which these skills can be imparted to the children. Teachers need to be trained to work more effectively with different types of texts and to introduce these into their lessons. Their reliance on textbooks for information needs to be limited and they need to learn how to draw on materials generally available.

1.1.3 Areas for further research

We feel that there are three areas in which research could be profitably undertaken.

- ? A longitudinal study, investigating the content of teacher-training methodology courses and the practice of teachers once they start teaching in order to assess what teachers retain and implement from the courses which they do.
- ? A comparative study of existing INSET programmes in order to establish which are most effective and to isolate what makes them more effective than others so that this could be duplicated.
- ? The design and implementation of an INSET course aimed at improving methodology

1.2. Resource provisioning at schools

1.2.1 Resources for teachers

Teachers need to break away from the idea that they need to be experts in all the areas which they teach and see themselves more as researchers. They need to be encouraged to read in the areas which they teach so as to keep themselves up-to-date, rather than relying on the courses which they did at training college.

In the results of the survey we conducted (see Appendix B) on the types of materials teachers would like, every teacher voted in favour of a set of reference books for their own use. These could include subject-specific encyclopaedia, as well as relevant books for children on various Geography topics, such as the few supplied to teachers in the third part of our field research. The encyclopaedia would help teachers to have correct and up-to-date information at hand and the children's books would allow them to familiarise themselves with the ways in which different authors have presented such information.

When radical changes occur, such as the re-organisation of the provinces and the appointment of premiers and capitals for each one, the department should provide information for teachers. Teachers made numerous errors when teaching the new provinces because they did not have access to this information that was presented in a clear and systematic form.

1.2.2 Implementation of recommendations

There are a number of ways in which this could be done. Regional offices could have displays of books and magazines currently available which would be of use for teachers as many teachers, especially in rural areas and small towns, do not have access to shops which sell educational materials. Community libraries could also be used to get information about new books and new books out into areas which are not well serviced.

The establishment of teacher-centres could play a role in disseminating information from the department, displaying of new materials and provide a venue for departmental and teacher initiated workshops. The most expensive route would be for each school to be supplied with books and support materials for teachers and learners but at this point in time, budgetary constraints probably make this not an option.

1.2.3 Resources for learners

As we have noted above, the teacher is the only resource which children presently have access to. We feel that children need to learn to work with different types of resources. Here the question of textbooks also arises. Langhan (1993) and Macdonald (1990) both called for textbooks, which take into account the fact that most learners in South Africa do not have English as a primary language. To some extent publishers have heeded their call although some of the new books with which we worked were not without problems and contained factual errors - unforgivable in a primary school text.

One teacher argued strongly in favour of learner workbooks and a teacher guide rather than textbooks. Perhaps this is a solution which could be considered. If workbooks were printed on cheap paper, it might prove to be a cheaper alternative than buying textbooks for schools. If carefully written, these could mean that a child-centred methodology be implemented, that children would have access to accurate maps with which to work and that they have access to different kinds of information and materials.

Finally, resources such as *Bala O Ithute* could be used to a much greater effect than is presently done. *Bala O Ithute*, given that it comes out in English as well as a number of African languages, is the one bi-lingual resource which exists in South Africa. *Bala O Ithute* and/or the Education Departments could encourage teachers to make more use of it. *Bala O Ithute*, however, also needs to improve their texts. We found an instance of an illustration which had been wrongly labelled which caused on teacher enormous problems in his lesson. We also found that some articles had not been properly proof-read and thus there were innumerable literals which made reading difficult.

1.2.4 Suggestions for further research

When new materials are introduced, either for teachers or learners, this should be monitored so as to establish the effectiveness of the new materials in terms of teacher and learner performance.

1.3 Medium of instruction

1.3.1 The situation in the schools

The issue of language in education policy, an extremely thorny issues, and is one which it seems, will never go away. Schools and parents have voted for predominant use of English however teachers, especially in the lower grades, experience great difficulty implementing this as they acknowledge their children do not have enough English to comprehend what happens in the classroom. While the teachers take cognisance of this and spend a lot of time teaching vocabulary and terminology in English, children's learning load remains much heavier than their English primary language peers.

1.3.2 Recommendations and suggestions for further research

We would like to recommend that teachers be encouraged to employ a more bi-lingual approach to teaching and that this be monitored through classroom-based research in order to establish how best to work and whether there are positive results in terms of learner achievement.

1.4 Conditions under which teachers work

Teachers are still working under difficult conditions which need to be addressed.

1.4.1 Farm-school teachers

Teachers in the farm schools are isolated. Their isolation makes it difficult for them to access resources which could be useful in their teaching. They are also isolated from other teachers with whom they could share ideas and resources. They have little contact with the department other receiving circulars. The effect of this isolation undermines their confidence in what they are doing and makes them nervous about implementing the new curriculum.

Farm-school teachers have few resources to use in their classrooms and few reference materials although they showed great initiative in making their own charts and maps. They have no duplicating facilities and thus developing child-centred materials is almost impossibility as they have to rely exclusively on the chalkboard. Ways need to be found of supporting farm schoolteachers with up-to-date materials and of organising ways in which farm-school teachers can work together and share ideas with other teachers.

1.4.2 Teachers in township schools

Township schools appear to be much better resourced than they were in the past. All the schools we worked with had telephones and duplicating facilities. However the classes are still large - most the classes we saw contained about 50 children per class. This makes it difficult to implement a more child-centred approach to teaching and means that teachers have little time for individual problems. Teachers expressed resentment about the large class sizes.

Money seems still to be a problem so, although there are duplicating and photocopying facilities, there is no money for the paper and teachers cannot use them freely to make worksheets for their children.

Learning resources, over and above textbooks, are in short supply. This will constitute a problem in the implementation of Curriculum 2005 as children will be expected to work with different resources which the school do not have at the moment.

1.4.3 Recommendations

While we acknowledge that the Free State Education Departments has taken serious steps to reducing the inequities of the past, we note that there are still great shortfalls in resourcing. More still needs to be done in terms of providing more physical, material and financial support to previously disadvantaged schools. The student/teacher ratio, while improved, still needs to be further reduced.

1.4.4 Suggestions for further research

Classroom-based research, monitoring the impact of changes in the above areas, would help to direct education departments on how best to use financial resources in the future.

2. Changes for teachers to implement

While often research recommends that interventions on a large scale be made, we feel that teachers themselves can implement a number of changes which would impact positively on their effectiveness in the Human and Social Sciences classroom. The changes which we feel teachers should make are as follows:-

2.1 Greater focus on learners and their needs

Teachers need to shift away from expecting their children to be passive receivers of information and rather to encouraging children to bring their observations and questions to the class. Their lessons need to be structured so as to present problems to children allowing them to attempt to solve these problems rather than presenting them with pre-packaged information which may not be questioned. Geography is especially important in that it is an area in which responsibility for the environment could be engendered. There is little evidence of this happening and it is an area which needs to be seriously addressed.

2.2 Develop children's' skills

All subjects require that children apply broader, skills such as reading and writing, however, some subjects, and Geography is one, require that children read specific types of texts. Teachers should teach the children how to deal with these. Children also need to learn the specific writing skills related to each subject thus they need to, be given a chance to write extended pieces - not simply one-word answers.

Geography also teaches and requires the special skills of graphicacy - i.e. learning to access information presented graphically or through diagrams. Children need to learn not only to access this information but also to develop their ability to present information graphically as well. Thus children should be encouraged to draw their own maps; to use symbols; to present information in table or chart form.

2.3 Learners and materials

Learners may have difficulty processing the textbooks but if they are never given that chance to work with them, this situation is never going to change. Teachers need to help children to unlock the information in the textbooks and encourage them to deal with information presented in different ways such as tables, pie-charts and maps.

Teachers could collect other materials which relate to what they are teaching in the classroom. Newspapers and magazines often cover issues which relate to the curriculum. Some have children's sections which deal with aspects of the curriculum and could be used - just as we experimented with *Bala O Ithute*.

2.4 Working with other teachers

Sharing ideas and problems with people working in the same sphere helps to lighten one's load. It also means that teachers get adult feedback on materials which they might produce or ideas they might have for presenting different aspects of the syllabus. Sharing resources means that teachers do not have to produce everything for themselves.

E. CONCLUSION

We feel that the issues which we have covered in our research are all problems which are not easily, cheaply or quickly resolved. However, we feel that unless major attention is given to these areas, children in South Africa will continue to struggle with the burden of an unequal education inherited from the past.

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