STANDARD FOUR ASSESSMENT

REPORT ON THE MONITORING OF LEARNING ACHIEVEMENT

SURVEY PROJECT

BY

EXAMINATIONS RESEARCH AND TESTING DIVISION

MINISTRY OF EDUCATION

BOTSWANA

Volume II: Report to Teachers

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FOREWORD

The Ministry of Education is committed to improving the quality of education. This objective can only be achieved if there is information on which to base action plans. It is for this reason that the Ministry embarked on this survey project, *Monitoring Learning Achievement (MLA).* Its major objective was to follow up recommendation 17b of the Revised National Policy on Education (RNPE, 1994), which required that periodic surveys be carried out to assess the extent to which the curriculum is meeting the objectives. Readers who are acquainted with the RNPE know Government takes the stand that:

> *While this evaluation presently takes the form of monitoring of programmes by Curriculum Development Officers and feedback from teachers, a more systematic approach in terms of data collection, statistical analysis, etc., should be adopted (RNPE, 1994 p.17)*

National Development Plan VIII recommends periodic Assessment and Monitoring of the quality of education. Assessment leads to dissemination of information on the performance of education so that positive action can be taken towards attaining quality education. This study is consistent with NDP8.

This project was meant to fulfill yet another commitment. Botswana is a signatory to the Jomtien (1990) resolution which required that by the year 2000, all school going age children must be in school. The Ministry worked hard and success in getting children to school has been high. But getting children to go to school is only one chapter of giving education to the country. It is necessary to establish whether the children who are going to school are indeed learning what is useful to them. To this objective, one of the core indicators of the quality of education is the percentage of a defined group of learners who become competent on the competencies they are supposed to acquire. In pursuit of this, Botswana worked on MLA as part of an international team to establish the level of achievement of Standard Four pupils in Africa. The MLA project was therefore also conducted in other countries, though each country emphasized the competencies they considered important for their children to master.

Tests were administered to Standard Four pupils and background information was collected by use of questionnaires. These instruments generated a lot of data. I am glad to present this volume of the report, which is meant for teachers. It is not only to be read, but also to extract the relevant information and use it for improving the quality of education given to the children.

It is recognised that this is a survey report. A lot of information is presented, but the nature of the project does not allow for an in-depth study of any one factor on education. However, the report contains ample information to assist teachers target their activities towards enabling pupils achieve better results.

I wish you productive reading for the improvement of the quality of our educational system.

P T Ramatsui
Permanent secretary
Ministry of Education

ACKNOWLEDGEMENTS

The Monitoring of Learning Achievement (MLA) Project was a large-scale undertaking and therefore needed the cooperation of many people. Examinations, Research and Testing Division (ERTD) is grateful to all those who played one role or another to make it possible to execute this project.

The bulk of the funding for this project came from UNICEF. This was supplemented by government, which did not only contribute staff time, but also put in considerable funds to take over from where UNICEF stopped. UNESCO gave considerable support, materially, technologically in terms of know-how, as well as morally. Mrs S Mogami, the Deputy Permanent Secretary, on behalf of the Permanent Secretary, gave support to the project from its inception to the production of the report. We extend our gratitude to all of them for enabling Botswana collect the information and disseminate it so that teachers and officers at different levels can make use of it.

Senior Education Officers and Education Officers in the field gave considerable amount of their time to the project. Heads of primary schools sampled did not only permit the use of their schools for information gathering, but helped with all the administrative aspects of the work as required. The classroom teachers got thoroughly involved in this project. They handled most of the data collection and established the competency standards. We are most obliged for their help.

We are indebted to the data clerks and the ERTD secretaries who made it possible to capture the massive data. In the same way, piloting the instruments and collecting data would not have gone on smoothly without efficient transport organization.

It is not possible to mention everyone who assisted in this project by name in this report. However, there were two overlapping groups of persons who were charged with the responsibility of driving the project forward. These were the Working Group and the Core Team. We acknowledge the dedication of the following in making it possible for the project to be completed:

Core Team:

Mrs S Moahi	Examinations, Research and Testing Division	Gaborone
Mr N Koolese	Curriculum Development	Gaborone

	And Evaluation Department	
Mr O Pansiri	Primary Department, Ministry of education	Gaborone
Mrs M Keitheile	Examinations, Research and Testing Division	Gaborone
Mrs S Barungwi	Examinations, Research and Testing Division	Gaborone
Mrs N Zulu	Primary Department, Ministry of Education	Gaborone
Mr M O Mogapi	Examinations, Research and Testing Division,	Gaborone
Dr C I Cele	Examinations, Research and Testing Division	Gaborone

Working Group

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Mr N Koolese	Curriculum Development	Gaborone
	And Evaluation Department	
Mr O Pansiri	Primary Department, Ministry of education	Gaborone
Mrs M Keitheile	Examinations, Research and Testing Division	Gaborone
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Mr A King	Curriculum Development and Evaluation	Gaborone
Mrs T K Majela	Curriculum Development and Evaluation	Gaborone
Mrs L Mpotokwane	Curriculum Development and Evaluation	Gaborone
Mrs G Mosinyi	Primary Department	Mochudi
Mrs G Mokwena	Primary Department	Molepolole
Ms M K Mack	Primary Department	Gaborone
Mr G Motswaledi	Primary Department	Gaborone
Mrs T L Tiro	Primary Department Teacher Tshiamo School	Gaborone
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Mrs J Modimoeng	Primary Department Teacher Borakalalo School	Molepolole
Mrs V.B Mogapi	Primary Department Teacher Tshiamo School	Gaborone
Ms Tlamelo S Beleme	Teacher Training and Development	Tsabong
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Ms Imelda Rametsana	INSET	F/town
Mr M O Mogapi	Examinations, Research and Testing Division,	Gaborone
Ms E Molobe	Planning, Statistics and Research Division	Gaborone
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Mrs Masego Mokubung	Planning, Statistics and Research Division	Gaborone
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SURVEY PROJECT

EXECUTIVE SUMMARY

Introduction

In order to implement the Revised National Policy on Education (1994) which requires assessment and monitoring of the progress of education, a project to assess the achievement of Standard Four pupils in Literacy in Setswana, Literacy in English, Numeracy and Life Skills, was started in February 1999. This project was also intended to serve as the vehicle for collecting information required for Education For All (EFA) Year 2000 Assessment, which was aimed at establishing the percentage of pupils who had had four years or more of primary education who mastered a set of nationally defined basic learning competencies.

The project was set up in a regional context where East and Southern African countries got together to determine how the assessment was to be carried out. West and Northern African countries were also doing the same thing, so that the overall assessment became an all Africa-wide project called **Monitoring Learning Achievement (MLA).**

The important point about this regional project was that each country determined its own basic learning competencies. Initially instruments were drafted together, but in the end each country finalized the instruments to reflect their competencies. Each country decided on what constituted competency in each field. Comparison of countries was not a target of the assessment.

Conduct of the Study

A working group of 33, comprising officers from various departments of the Ministry of Education and classroom teachers from primary schools, was formed to work on the project. A Core Team of eight officers was established out of the Working Group to follow the daily operations of the project.

The Working Group defined the basic learning competencies on which the pupils were to be assessed. The classroom teachers and the Curriculum Development and Evaluation Department verified the list of competencies. The Working Group scrutinized the draft regional instruments against the competencies that had been defined as basic for Standard Four pupils in Botswana. New items were constructed for competencies that were not addressed by the regional items

and modifications were made to the regional items where the competencies defined for Botswana required such modifications.

Four tests and four questionnaires were developed for the final instruments. The questionnaires were for the pupils, headteachers, teachers of Standard Four, and the parents (guardians) of the pupils. The tests were one form each for Literacy in Setswana, Literacy in English, Numeracy and Life Skills. The Numeracy, Life Skills and Parents Questionnaire were translated into Setswana for administration to all sampled pupils, except those from English medium schools. Pupil Questionnaire was not translated because it was administered by the invigilator reading a question at a time to the pupils and allowing for translation to make the meaning clear. Primary school classroom teachers established the competency cutoff for each test.

Appropriate training was given to all those who would collect the data. The main data collectors were the classroom teachers who were specifically recruited for the job. The Working Group supervised and assisted at all stages. Data were collected from seventy primary schools that were sampled to be representative of the school population in the country. On the basis of the Pupil Questionnaire, the pupils who responded were as follows:

GENDER	Region Name						Total
	West	South	Central North	South Central	Central South	North	
FEMALE	325	386	410	802	539	264	2726
MALE	321	412	414	804	518	265	2734
Total	646	798	824	1606	1057	529	5460

Data entry and analysis and production of the initial draft report were carried out by ERTD who was the project coordinator.

Results of the Study

The pupils sampled are of an average age of 10.67. The proportion of males and females are practically equal. Most of them stay with their parents, particularly mothers. They live near schools and mostly walk to schools. Most of them like schooling and say they are learning a lot from school. Homework given to them is often not done because of helping with work at home and playing with friends.

Performance of the pupils on each test and on each domain was generally weak. The percentage of competent pupils on each complete test was as follows:

Literacy in Setswana	39.6
Literacy in English	21.9
Numeracy	21.2

Life Skills 77.7

Performance of pupils differed significantly according to various sub-groups. Females outperformed males in all tests. Significant differences were observed on groupings on the basis of region, Remote Area versus the rest of the schools, school location, parental educational level, etc.

Mature men and women (average age of 50.24), with long administrative experiences, head schools. Some (42.4%) of the headteachers had academic education up to primary level. The schools are not new, with the oldest in the sample having been founded in 1944 and the youngest in 1995. A lot of the schools were founded after independence and many more after the first National Policy on Education (1977) was published. Schools have modest scholastic provisions, though many reported lack of typewriters and duplicating machines. The schools are generally healthy learning environments, with toilets, water, and school feeding programmes in place. Medical facilities are within 3km from most schools.

Most of the teachers are qualified. They report that they spend a lot of time on lesson preparation, marking the work of the pupils, assessing them and giving remedial lessons. Most of them would leave teaching if there were an alternative. Female teachers make up 78.7% of the teaching force sampled. Most of the teachers are between 21 and 40 years. The majority of the teachers had at least secondary education, with 11.6% attaining only primary education. Their mean teaching experience is 11.03 years. Teacher absenteeism is a factor in a number of schools. They attribute poor performance of pupils to factors like automatic promotion, parental indifference or family problems, orphanhood, lack of teaching skills, etc.

Conclusion and Recommendations

The main conclusion of this study was that most of the pupils did not reach the competency levels established by the teachers, except in Life Skills. Many factors account for this low level of achievement.

Recommendations were made as to ways of enhancing the learning acquisition by the pupils and thereby improving the standard of their educational attainments. Establishment of a National Assessment Programme was a major recommendation made on the basis of this study. Issues that were already covered in other reports, principally RNPE, have been captured because of the need for action the data point to. These recommendations include implementation of Continuous Assessment, establishment of Pre-primary Education Programme, emulation of the practices in English Medium Schools by Setswana Medium Schools, establishment of the class ceiling at 30, and having Form Five as the long term target for basic education. Sensitization of the parents towards the education of their children, giving more focus to the RAD schools, employing only qualified teachers, and tightening on teacher absenteeism and having alternative strategies in cases where absenteeism is due to illness were some other recommendations that were made. It was further recommended that errors made by the pupils on the tests should be analysed, the pupils should be tested again in Standard Six, an

investigation be carried out into pupil abuse, and that instructional practices of the teachers should be assessed. Provision of electricity, computers, photocopiers, and readers were advocated.

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1. INTRODUCTION

1.1 Background to the Study

Before the arrival of Western type of education, children in Botswana were socialised into adulthood through some kind of traditional initiation schools such as *Bogwera* for boys and *Bojale* for girls (Coles, 1985.p1). The *Bogwera* and the *Bojale* were times when those approaching adulthood received a general basic training. They learnt of their physiology, tribal history, games (incorporating riddles, puzzles and proverbs to indicate socially desirable attitudes) and skills of hunting and fighting. This was the time those entering adulthood understood that they had rights and responsibilities.

'Western type of education had its origins in the work of Moffat and the Kuruman Mission Station established by the London Missionary Society in 1821' (Coles, 1985, p2-4). Though the educators were concerned with the spread of Christian faith in Bechuanaland, they were also concerned with the broader aspects of education, such as the introduction of applied skills, with agriculture being the dominant area. The traditional and the new educational systems were to exist side by side for some time.

At independence, the government inherited a western type of educational system that was poor in quality and catered for a very small proportion of the population. The school curriculum did not address the needs of the society, especially its children. In 1976, out of 3918 classes, there were only 2275 classrooms. Therefore, 1643 classes did not have classrooms. Untrained teachers made up to 30% of the teaching cadre. Studies on learning achievement revealed that a majority of primary school leavers lacked minimal competency in reading and writing (Husen, 1977). Thus, a radical approach was needed to make education a truly national entity. The then President of the Republic of Botswana appointed a Commission on Education in December 1975, to chart the path of education. The Commission produced its report in April 1977, after extensive consultations and studies undertaken within and outside the country (Republic of Botswana, Government Paper No.1 of 1977. National Policy on Education, P.1).

As captured in the report, the Commission saw the need for education to promote both continuity and change:

> Eleven years ago the country was a colonial Protectorate, the economy was stagnant and Gaborone, Selibe-Pikwe and Orapa did not exist. All this has fundamentally changed. Further development and change is inevitable, which poses for education the problem of cultural continuity while preparing children for a world far different from the one their mothers and fathers grew up in only thirty years ago. [page9]

The Commission recommended making education more accessible, with emphasis on the primary level. However, problems posed by a large country with a small, scattered population would have to be addressed so as to rationalize location of school facilities. This point was emphatically brought out by the National Policy on Education (NPE, 1977, pp9-10).

As stated in NPE (1977), school fees were to be abolished, development of infrastructure was to be accelerated and teachers' training was to be intensified. Great strides were made following the implementation of the recommendations. This period saw massive expansion of school places. The data at hand indicates 40% of the primary schools were built and opened between 1977 and 1987. Pupil enrolment also doubled as a result of increased places (Statistical Bulletin, 1998. P.14).

The implementation phase lasted for 15 years (1976-1991). During that same period, the socio-economic situation of the country changed dramatically. The change was largely due to the emergence of the mining sector as an engine of growth. What seemed not to have changed was pupil achievement as noted in the government white paper No 2 (1994):

> 'However, although not by design, the success in quantitative development of the school system has not been adequately matched by qualitative improvements. Levels of academic achievement are a cause for concern. (RNPE, 1994 p.3)

A rethinking in the educational system was needed. The second National Commission on Education was appointed in April, 1992. The Commission's terms of reference included review of the education system and its relevance; identification of problems and strategies for further development; establishing a structure for universal access to basic education and consolidating and vocationalizing the curriculum at the primary level. The report was accepted, with some amendments as contained in the Government White Paper No. 2 of 1994. The Revised National Policy on Education (RNPE, 1994) was thus established. This time around, concentration was in making education more accessible to all citizens and on improving the quality and relevance of education. The intention was to prepare Botswana to remain viable in the advancing industrial and technological world.

Many points of action on education in Botswana are contained in the RNPE. However, the policy provisions, which are particularly relevant to the current study relate to finding out if access to education is now equitable and the quality of education is improving.

Thus the Monitoring Learning Achievement (MLA) project fits hand in glove with the recommendations of the 1994 RNPE.

1.2 The Origins of the MLA Project

The United Nations has been instrumental in getting nations together so as to enable them discuss their strategies for the advancement of education. One such forum was convened in Jomtien in Thailand (1990), principally by UNESCO/UNICEF to focus on the education of children. The Jomtien Conference ended with member countries committing themselves to a number of resolutions. In particular, countries resolved that by the year 2000 all children of school-going age must be in school. While in school, they should 'incorporate useful knowledge, reasoning ability, skills and values' (Article 4: Focusing on the Learning Acquisition, World Declaration on Education for All, UNESCO, 1990).

The best way to know whether learning is taking place is to assess the learners. Obtaining information on the learning acquisition of the pupils is the origin of the global **Monitoring Learning Achievement** (**MLA**) project. The principal aim of the MLA study was to assess the level of attainment of pupils in Standard Four and to gather information on the factors that facilitate or hinder learning. The information so gathered was to be used for improving the quality of education.

1.3 Synopsis of the Report

The report highlights portions of the National Policy on Education and the Revised National Policy on Education. The project aims at establishing the level of performance of Standard Four children in Literacy in Setswana, Literacy in English, Numeracy, Life Skills and the factors that impinge on learning.

The sampling strategy and the population to which the findings can be generalized are described. The processes of instrument development, data collection, and data entry are presented.

The results are presented in three parts: information derived from the questionnaires, performance of the pupils on the tests, and sub-group differences on the tests. A summary of the findings is followed by recommendations arising from the study experiences.

1.4 Purpose of the Report

This report is addressed to primary school teachers. The study report is presented in a simplified way so that teachers can easily understand what was investigated, and the outcome of the investigation. It is intended that all teachers should read this report so as to perceive achievements that have been made in education, the shortfall still requiring joint efforts of the classroom teacher and the education managers, and the level of

academic achievement of the pupils as judged by the standards teachers would like the pupils to attain.

It is by taking collective action to reduce or remove factors that are disabling to the learning of the children that the quality of achievement of the pupils can be uplifted.

2. CONDUCT OF THE STUDY

2.1 The Working Group and Core Team

A Working Group of 33 was constituted out of officers from various departments of the Ministry of Education and primary school teachers. The group had responsibilities over various activities, from definition of the competencies to polishing up the report. The purpose of including primary school teachers was to ensure that the competencies to be assessed were indeed the competencies Standard Four pupils should acquire.

A Core Team of eight officers was constituted from among the Working Group members. The role of the Core Team was to drive the work forward, by planning, coordinating and executing the details of the work. Examinations, Research and Testing Division of the Ministry of Education served as the coordinator of the project, and handled the instrument production, data collection arrangements, data entry and analysis, the initial drafting and eventual refinement of the report.

2.2 Instrument Development

The Working Group started by defining concretely what Standard Four pupils are expected to learn in Literacy (Setswana and English), Numeracy and Life Skills. After defining the minimal learning competencies, the Working Group revised the regional draft instruments that were developed for Eastern and Southern Africa, except for Literacy in Setswana which was constructed from scratch. The purpose of this review was to make sure that the items were technically sound and addressed the competencies that had been defined for Botswana pupils. This resulted in substituting some of the regional items and constructing others to address Botswana competencies that had not been addressed by the regional instruments. After piloting, the final form for each area was constructed.

When the instruments were ready, teachers from the sampled schools were trained for the administration of the instruments. Part of the training involved going over the competencies that were defined for assessment. This gave further assurance that the defined competencies were relevant to Standard Four pupils in Botswana.

2.3 The Target Population

The MLA study was aimed at assessing the learning achievement of pupils who were in Standard Four in 1999. Government guideline for entrance into Standard One is that a

child should be at least six years old. The intended population would therefore mostly be 10 years old.

2.4 Sampling Procedure

There are six inspectoral regions in the country, roughly corresponding to the geographical areas, namely: South, South Central, Central North, Central South, North and West. The regions are composed of 38 inspectoral areas as reflected in Appendix I. Schools were grouped on the basis of these regions and 10% of the schools in each region targeted for selection. The location of the school, whether urban, semi-urban or rural and the school founding body were also taken into consideration. English Medium Schools were selected in proportion to their number in the country.

The end result was 70 schools with each educational region proportionately represented in the sample. The number of schools, classrooms and the expected number of pupils in the sample per region are tabulated below.

Region	Schools	Classrooms	Expected Pupils
West	8	21	687
South	14	27	829
Central North	11	27	872
South Central	17	46	1602
Central South	13	34	1170
North	7	17	554
TOTAL	70	172	5714

Therefore a total of 5714 pupils in 172 classrooms were expected in the sample.

2.5 Data Collection Procedure

The Data collection required training a number of teachers and officers. One teacher was invited from each school in the sample and trained in the project concepts and the data collection procedure. The teachers so trained became coordinators in their schools. Training was cascaded from the center in Gaborone to school level. The end products were teachers trained in data collection, with their leaders called coordinators and the rest of the data collectors called test administrators. Members of the Working Group trained the teachers and supervised the data collection exercise.

Test Administrators from each school administered the instruments in their own schools. However, to enhance the credibility of the data, coordinators were swapped among schools. It was the coordinator who collected the instruments for each day from the Headteacher, opened in the presence of the pupils and the test administrators. The test administrators supervised the actual process of administration and finally sealed off the work of the pupils before giving back to the Headteacher. At the end of instrument

administration, the scripts were collected by the Working Group members and brought to the office.

The instruments were administered September 10 to 14, 1999, one week into the beginning of the third term of the school calendar. The tests and the questionnaires were filled in at the schools, except for Parent Questionnaire which the pupils took home to their parents/guardians. In some schools, parents were called to the schools since that was the more efficient way of administering the questionnaire.

2.6 Description of the Instruments Used

A total of four questionnaires were administered: one each to the parents, Headteachers teachers and pupils. Each questionnaire elicited personal data as well as factors related to the role of the respondents in the child's learning process.

In addition to the questionnaires, the pupils took four tests in Numeracy, Life Skills, Literacy in English and Literacy in Setswana. The Numeracy and Life Skills tests and the Parent Questionnaire were translated into Setswana. The number of items per domain in each test is tabulated below.

TEST							
Numeracy		**Life Skills**		**Literacy in Setswana**		**Literacy in English**	
Domain	**Items**	**Domain**	**Items**	**Domain**	**Items**	**Domain**	**Items**
Arithmetic	15	Health and Hygiene	6	Interpretation	5	Vocabulary	5
Measurement	4	HIV/AIDS	4	Grammar	18	Reading Comprehension	12
Geometry	5	Psychosocial	10	Reading Comprehension	17	Sentence Structure	6
Everyday Statistics	4	Science and Technology	4	Written Expression	8	Grammar	4
		Civic Sense	3			Composition	3
		Environment	3				
Total	**28**	**Total**	**30**	**Total**	**48**	**Total**	**30**

It can be seen that some domains had as few as three items, making the test unsuitable for assessing individual competencies on those domains. However, the assessment was not meant for accuracy of assessment of individuals, but an assessment of the education system. The accuracy of the assessment is dependent upon the fact that the few items were administered to a large representative sample.

2.7 Data Entry and Analysis

Data entry clerks were recruited and trained on the coding and entering of the data into a pre-prepared format in excel. Each pupil was linked to all the instruments by means of a unique ID number. Analysis of data involved mostly frequencies, percentages and statistical procedures called **ANOVA** and **t-tests**.

2.8 Establishment of Competency Levels

While data entry was going on, a workshop was conducted to establish the cutoffs that would be used for declaring pupils who reached the cutoffs as competent. Six primary school classroom teachers per test were the judges in this one-day workshop. During the training phase of the workshop, a competent pupil was defined as

> **….one who has understood Standard Four materials well enough to proceed to Standard Five work without difficulty. Such a pupil will have mastered what he/she was supposed to have learnt.**

Cutoffs were established domain by domain and the cutoff for each complete test was the sum of the domain cutoffs.

3. CONDITIONS OF TEACHING AND LEARNING

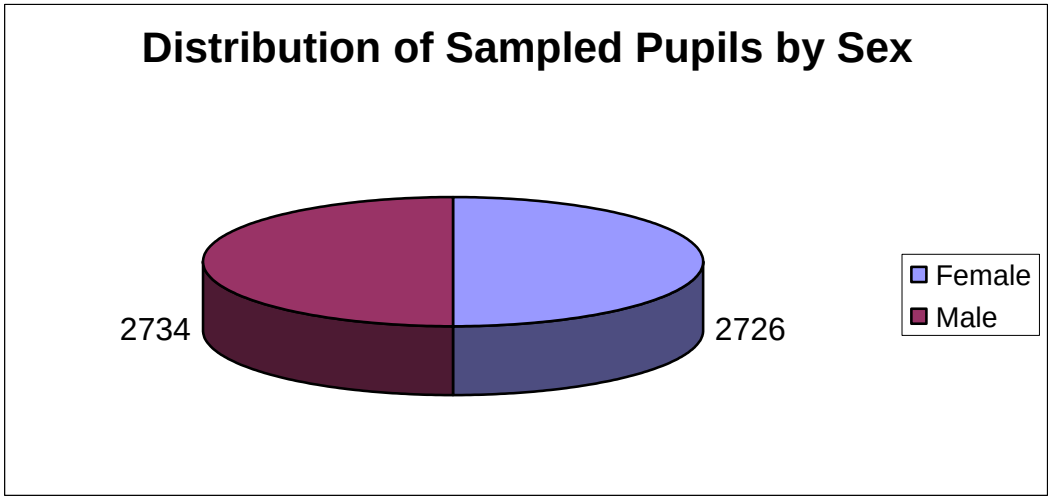
In this study, background information on factors that can affect the learning of the pupil was collected from the parents, the headteacher, the teacher and the pupil, by using questionnaires. Information that could be obtained through other procedures, such as interviews and observation was not included in this study.

3.1 Background Information Supplied by the Pupils

Background information supplied by the pupils is presented below.

3.1.1 Distribution of the Pupils Sampled by Sex

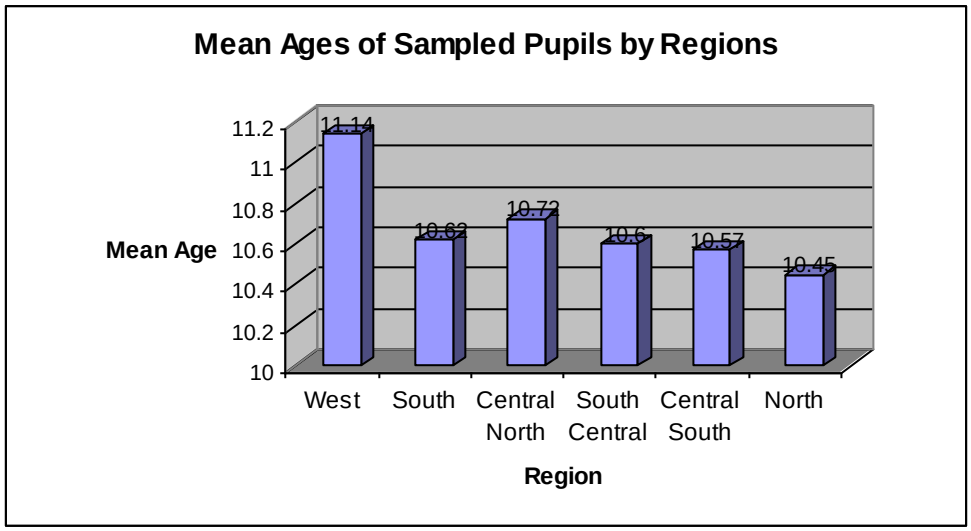
Responses from 5460 pupils were captured in the Pupil Questionnaire. The males and females were basically equal as depicted below.



This near equality of males and females in the sample was virtually true for every region.

3.1.2 Distribution of the Pupils Sampled by Age

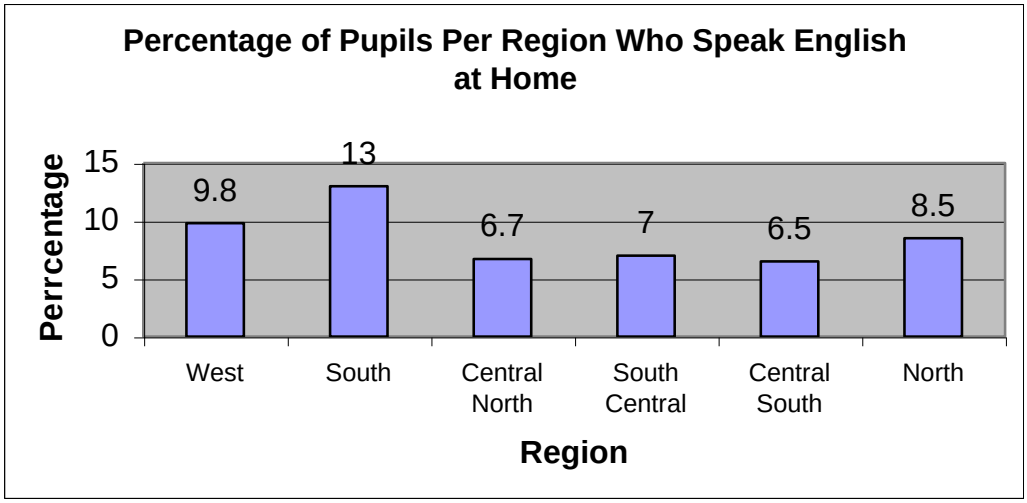
The 10-year-old pupils constituted 42.3% of the sample. 45.2% were 11-12 years old. Thus ages 10 to 12 constituted 87.5% of the sample. The fact that ages 10-12 capture the majority of the pupils indicates that the policy of starting schooling at the age of six is largely being followed. The mean age of the sample is10.67, with the female mean age being 10.51 and that of males 10.82. The chart below gives the mean ages of the pupils by region.



The North region had pupils with the least mean age, followed by Central South. The West region presented the highest mean age, followed by Central North. This suggests that the children in these regions are sent to school when they are slightly older than the children in the other regions.

3.1.3 Languages Spoken at Home

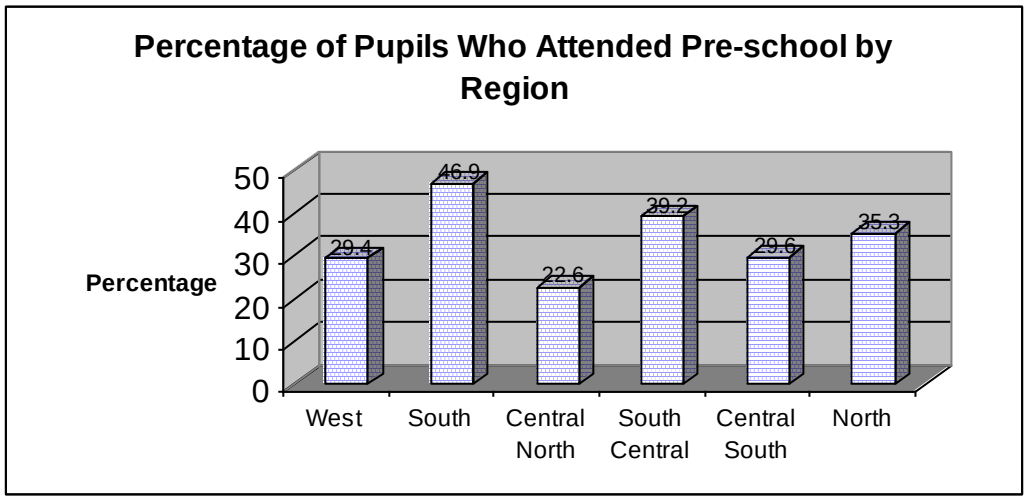
Pupils reported a variety of languages spoken at home as indicated at Appendix II. English is not widely spoken at home. Most homes in the country speak Setswana. The percentage of the pupils who speak English in the home is consequently small as reflected in the chart below.



South is the only region with 13% of the pupils speaking English at home. The rest of the regions are below 10%.

3.1.4 Pre-school Attendance

The chart below shows that the majority of the pupils did not attend preschool. It is only in the South region where up to 46.9% of the pupils attended pre-school.



Recommendation number 9 of RNPE (1994, p14) makes provisions for :

i. the portfolio responsibility for pre-primary education to be assigned to the Ministry of Education
ii. establishment of a pre-primary education unit within the Ministry of Education
iii. establishment of a pre-school development committee.

These developments give prominence to pre-primary education and should therefore foster its growth and development.

3.1.5 Pupils Taking Meals Before and After School

The table below shows the numbers and percentages of pupils having meals before and after school.

Table 1 Number of Pupils Having Meals Before and After School

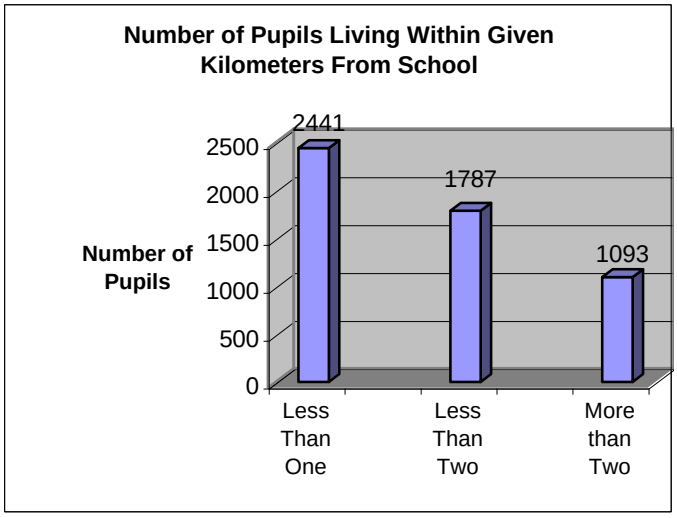
Having Meals	Yes		No		Total	
	f	%	f	%	f	%
Before School	4444	86.6	690	13.4	5134	100
After School	4336	87.3	628	12.7	4964	100

The majority of the pupils who responded to the two items have meals both before and after school. The number of pupils having meals only before school is about equal to the number having meals only after school (520 to 480).

The majority of the pupils therefore have something to eat before and after school. A few pupils reported they had 'no' that are a no meals at all. Their report may not be wholly factual, but it is an indication that a few pupils might not have enough to eat. Such pupils cannot learn effectively.

3.1.6 Distances Pupils Travel to School

The chart below gives the number of pupils who reported they live at various distances from school.



The largest number of pupils lives between one and two km away from school. The information supplied by the pupils can be compared with that supplied by the headteachers as presented in the table below.

Table 2 : Distances Pupils and Teachers Live From School as Reported by Headteachers

Distance	Pupils		Teachers	
	Frequency	Percent	Frequency	Percent
Below 1 km	18	26.9	38	57.6
1-3 km	26	38.8	10	15.2
3-5 km	15	22.4	13	19.7
Above 5 km	8	11.9	5	7.6

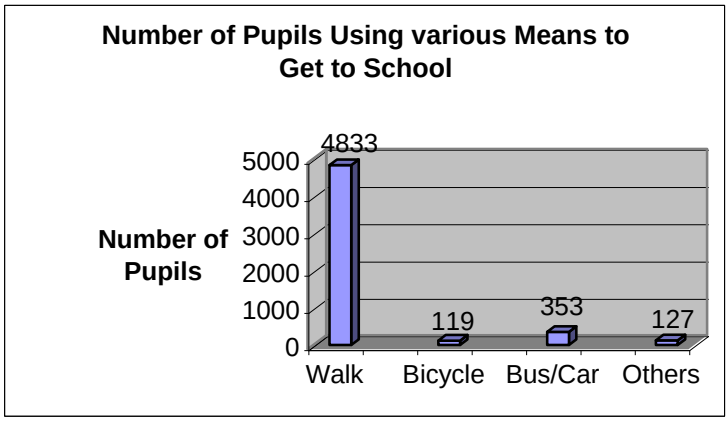
Total	67	100.0	66	100.0

Headteachers confirm pupils do not live too far away from school. The majority of the teachers and the pupils live within three km from school. The percentages of teachers and pupils who live beyond 5km from school are 11.9 and 7.6, respectively. Otherwise, as had been reported by pupils, schools are not so far away from homes of pupils. This is true for every region.

Pupils should therefore be able to get to school without getting too tired to learn.

3.1.7 Pupils' Means of Travel to School

Pupils mostly walk to school as shown in the chart below. A few use bicycles, bus/car or some other means. It is in the North Region where up to 14.8% rely on bus/car transportation. The region has the smallest percentage of the pupils who walk to school (75.1).



3.1.8 Time Taken by Pupils to Get to School

Since pupils stay close to school, most of them get to school within a period of 20 minutes. Over 70% of the pupils take less than 20 minutes to get to school. This is reflected in table 3 below.

Table 3: Time Pupils Take to Get to School

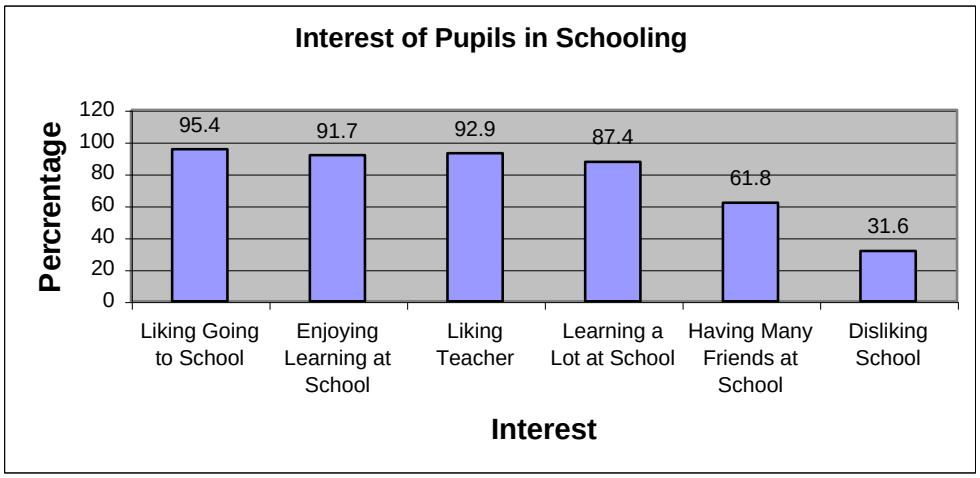
Time Range in minutes	Frequency	Percent
Less than 10	2149	39.5
10 – 19	1817	33.4
20 – 29	830	15.3
30 – 59	424	7.8

More than 60	219	4.0
Total	5439	100.0

On the basis of this sample, traveling to school is not as big a burden on the learning of the children as was the case by 1977.

3.1.9 Pupils' Interest in Schooling

Interests of the pupils in school were explored and the results are presented in the chart below.

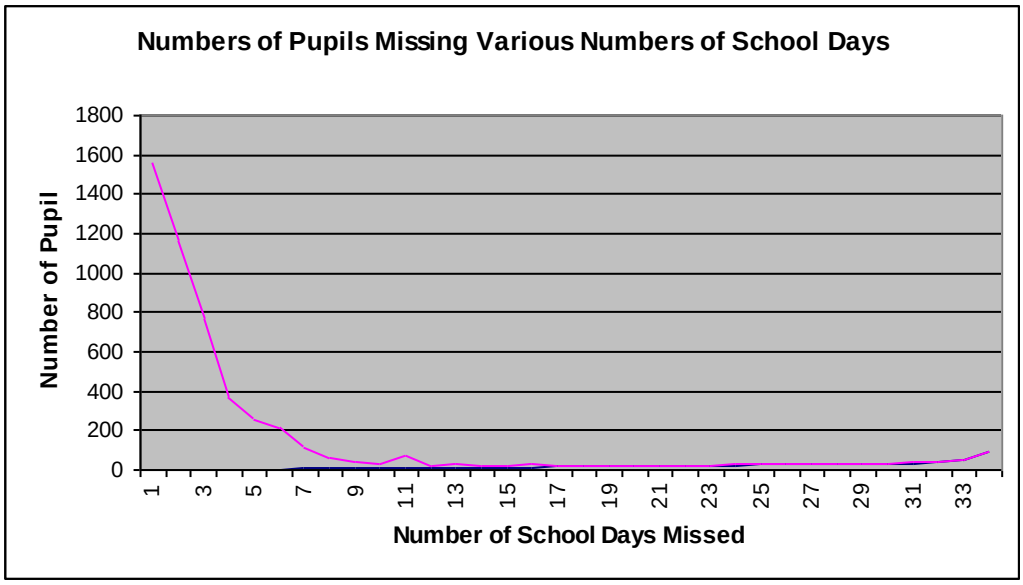


Most pupils who responded indicated that they liked going to school. Only 4.6% reported not liking going to school. The majority of them enjoy learning at school, with only 8.3% reporting that they did not enjoy learning in school. They further indicate that they learn a lot from school, besides enjoying learning. The majority of them like their teachers, with 7.1% reporting that they did not like their teachers. Though most of them indicated that they had many friends at school, a substantial number (38.2%) indicated that they did not have many friends at school.

Pupils are therefore generally positively disposed towards schooling.

3.1.10 Pupil Absenteeism

The chart below shows the number of days various pupils reported they missed going to school in Standard Four.



The mean number of school days missed by the pupils was 2.07. The chart suggests that absentee rate is low. 74.2% of the pupils missed none to two days only.

Ninety four point two percent of the parents report that their children attend school daily while 3.3 report that their children do not. A further 2.4% of the parents are not sure whether their children attend school daily.

The predominant reason given for missing school days was sickness (46.7%). Extreme cases of absenteeism like 93 days could be due to sickness.

3.1.11 Frequency of Homework

As portrayed in table 4, 89.2% of the pupils get homework from their teachers and 78.6% have someone at home to help them with the homework

.

Table 4: Receipt of Homework From Teachers and Help From Home

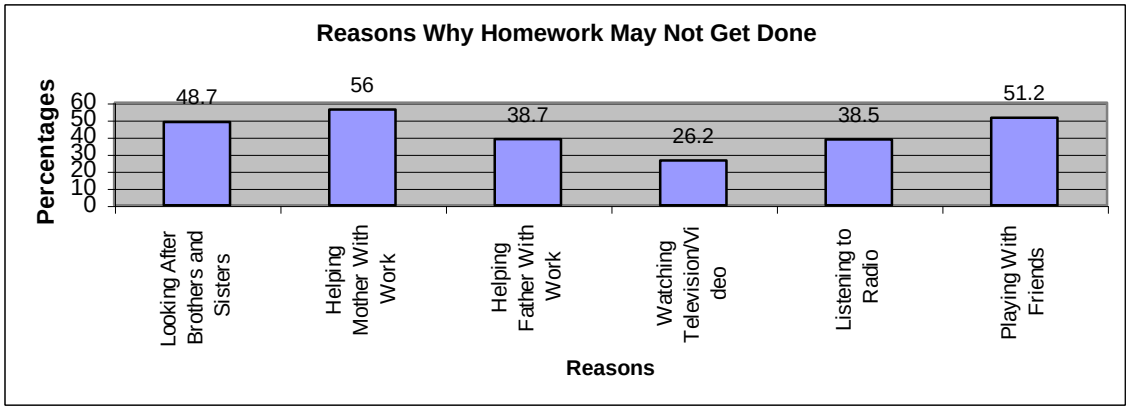
(a) Homework from teachers

Homework From teachers	Frequency	Percent
Yes	4824	89.2
No	586	10.8
Total	5410	100.0

(b) Help from home

Help at Home	Frequency	Percent
Yes	4214	78.6
No	1150	21.4
Total	5364	100.0

Sometimes the homework may not get done for various reasons as depicted below.



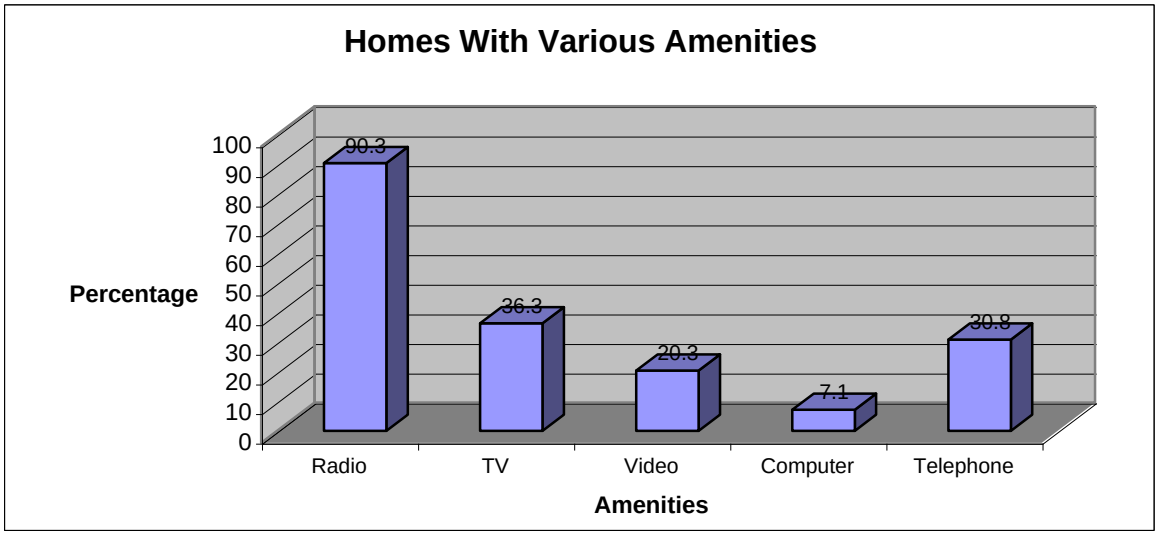
The most common reason for not doing homework is helping mother with her work, as shown above. It accounts for 56% of the respondents' failure to do homework. This is followed by playing with friends as a reason for failing to do homework. The least important reason for not doing homework is watching television/video (26.2%). This is followed by listening to radio (38.5%) and helping father with his work. The ordering of the reasons for not doing homework was therefore as follows:

1. Helping mother with work
2. Playing with friends
3. Looking after brothers and sisters
4. Helping father with work
5. Listening to Radio
6. Watching TV/Video

The above result should not be taken to mean that children don't like watching TV. Only 36.3% of the children in the survey reported that they live in homes where there are televisions. Where there is no TV in a home, watching TV cannot stand in the way of doing homework.

3.1.12 Homes with Various Amenities

It is portrayed in the chart below that most homes (90.3%) have a radio. A computer is the least available in the homes (7.1%), followed by video and telephone.



3.1.13 Use of Library and Newspapers

The majority of the children do not go to the library to read (3056, compared to 2328 who go). However, most of the respondents indicated that their parents buy newspapers/magazines (3385 compared to 1999). Table 5 presents the information related to pupils going to library and parents buying newspapers.

Table 5: Parents Buying Newspapers and Pupils Going to Library

(a) Pupil Going to Library

	Frequency	Percent
Yes	2336	43.2
No	3071	56.8
Total	5407	100.0

(b) Parents Buying Newspapers

	Frequency	Percent
Yes	3393	62.8
No	2006	37.2
Total	5399	100.0

It is possible some of the pupils did not count 'mobile libraries' as libraries. The number of children who indicated their parents buy newspapers seems high, but is consistent with the report from parents to be presented later. This will be checked against parents' responses.

3.1.14 Participation in Extra Maural Activities

Fifty one point nine percent of the pupils reported that they participate in sports and cultural activities as presented in table 6.

Table 6: Participation in Sports and Cultural Activities

Participation	Frequency	Percent
Yes	2778	51.9
No	2572	48.1
Total	5350	100.0

There is therefore a very high percentage of pupils who are not participating in extra-curricular activities. This is a concern because extra-curricular activities contribute to wellness and stress reduction.

3.1.15 Discussion of Pupil Questionnaire Results

The policy of equity, in terms of sending boys and girls to school, seems to be a resounding success throughout the country. The number of girls in Standard Four is essentially the same as the number of boys, as can be established from the sample.

The mean age of the pupils in Standard Four indicates that most parents are going by the policy of sending their children to school at the age of six. Forty two point three percent of the pupils are at the expected age of 10. A further 45.2% are within the ages of 11 and 12, possibly representing the provision that in some places children may have to be slightly older than six years to begin school so that they can be able to walk to school. The ages of 10, 11 and 12 take up almost 85% of the pupils in the sample. It is in the West region that slightly older pupils are found, perhaps reflecting the terrain which may require more strength to move to and from school.

Very few families send their children to pre – school. It is only in the South Region where up to 46.9% of the pupils in the sample had attended pre – school. This may account for the fact that South is the only region with 13% of the Standard Four children speaking English at home.

By the time of drawing up the first National Policy on Education (1977), a major worry was that some homes are so far apart that locating schools for all children to attend was problematic. The data here indicate that most children live within one to two km from school and take less than 20 minutes to walk to school. There is no region with more than 25% of the pupils living further than 2 km from school. This implies that the problem that was seen in 1977 has been effectively tackled and the burden on children greatly reduced. It is the North region with only 75% of the pupils walking to school and with the largest percentage of pupils staying more than 2km away from school.

In one item the majority of pupils responded that they liked going to school and were learning a lot from school, with only 4.6% responding that they did not like going to school. In a subsequent item there was a shift, with up to 31.6% of the pupils responding

that they did not like school. Though this still leaves most of the pupils indicating they like going to school, it raises a possibility that up to 30% of the pupils may not like going to school. The small percentage of pupils who indicate they do not like going to school may not be learning at their best. There is need to establish the interest of the pupils in schooling.

Most of the pupils have missed a day or so of Standard Four. The mean days missed is 2.07, mainly attributed to illness. Absenteeism of pupils can therefore be said to be low.

Teachers give their pupils homework and most of the pupils have someone to help them with the homework. However a few have no one to help them at home. Sometimes the homework may not get done. A major reason for this is helping mother with work, followed by playing with friends, looking after younger brothers and sisters and helping father with work. There seems to be a need to balance children rights with children responsibilities. Children should certainly have their share of work at home. However, their progress should not be retarded as they help out with adult chores. Parents should strive to strike a balance between training children to do work in the home and assisting them to progress in school. Children have a right to play. But they also have a responsibility to fulfill their roles in society. It is again on the parents/guardians to regulate time for playing and time for doing schoolwork.

The majority of pupils do not go to libraries to read. However, over 50% of them reported that their parents buy newspapers. These papers may not be directly related to their schoolwork. It is a matter of conjecture as to whether children indeed read the newspapers their parents buy.

In conclusion, the pupils are located near schools, they have meals before and after school and their teachers give them homework. It is the responsibility put on them at home and playing with friends that could interfere with their doing of homework. However, one would expect that during school time the children have time to learn. They mostly reported enjoying learning, which should lead to good achievement in school.

3.1.16 Policy Implications From Pupil Responses

From the pupils' responses, the following implications of policy implementation emerged:

1. The sample indicated that the number of boys and girls in school were equal. This was an indicator that equity in terms of equal gender access to school was achieved. What needs to be done is to check out for exceptions to this general finding and to maintain the effort that brought the situation of gender equity in school enrolment into being.

2. Most pupils in school fell within the ages of 10 to 12. The policy of sending children to school by the age of six was well achieved. The mean ages of the

males and females in the sample were 10.82 and 10.51, respectively. This also reflected equity to a large extent.

3 The proportion of pupils who attended pre-schools was found to be low. The Revised National Policy on Education makes provision for the Ministry of Education to take on the portfolio for this level of education so as to provide standards and to register such institutions. This level of education looks set to grow. The impact of pre-schooling on achievement will be assessed when performance on the tests is considered.

4. A major problem that was seen in 1977 seems to have been solved. This was the problem of locating schools for a scattered population. In this sample, the majority of the pupils live within one to two kilometers away from school. They mostly walk to school, taking less than 20 minutes. The region with the lowest percentage of pupils walking to school is the North (75.1%), which also has the highest percentage of the pupils living more than two kilometers away from school. The situation should be checked so as to establish remedial action. These children seem to live too far away from schools compared to their age mates in the other regions.

3.2 Background Information Supplied by the Parents

Information obtained from the parents is captured in the paragraphs that follow.

3.2.1 The Sample of Parents

A total of 5540 responses were received from parents, 86 of whom were parents of children in English Medium Schools. Table 7 shows the distribution of the parents according to the regions.

Table 7: Distribution of Parents Sampled by Region

Region Name	Frequency	Percent
West	644	11.6
South	807	14.6
Central North	816	14.7
South Central	1594	28.8
Central South	1151	20.8
North	528	9.5
Total	5540	100.0

A total of 5227 indicated their relationship to the children as shown in table 8. Most of the respondents were mothers (65.5%). Fathers constituted about the same percentage as other guardians (16.9 and 16.6, respectively).

Table 8: Relationship of Pupils With Respondents to Parent Questionnaire

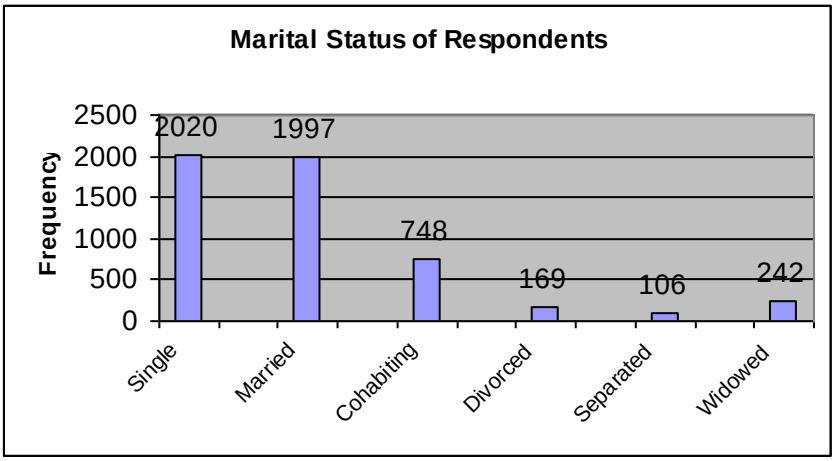
Relationship	Frequency	Percent
Father	883	16.9
Mother	3424	65.5
Guardian	866	16.6
Non Relative Guardian	54	1.0
Total	5227	100.0

Since the questionnaire was taken and filled at home in most cases, it was possible for an older sibling or even a non- relative to fill the form. If this happened it was supposed to be done on behalf of the parent or guardian and not the older sibling or non-relative who was not the custodian of the child. Out of the 920 guardians and non-relative guardians it is not possible to disaggregate who was an older sibling or a non-relative who did not

fully have custody of the child. However, fathers and mothers constituted 4307 of the sample, making the information predominantly parent-based.

3.2.2 Marital Status

Thirty eight point two percent of the respondents (2020) were single. Married respondents constituted 37.8% of the sample. A few are divorced, separated or widowed. This information is shown in the chart below.



A cross - tabulation of marital status with relationship below shows that the majority of the single parents were mothers. Fathers formed a very small proportion of the unmarried parents as most of them report being married or cohabiting. The number of married mothers in the sample was less than that of the single mothers.

Table 9: Cross tabulation of Marital Status with Relationship to Child

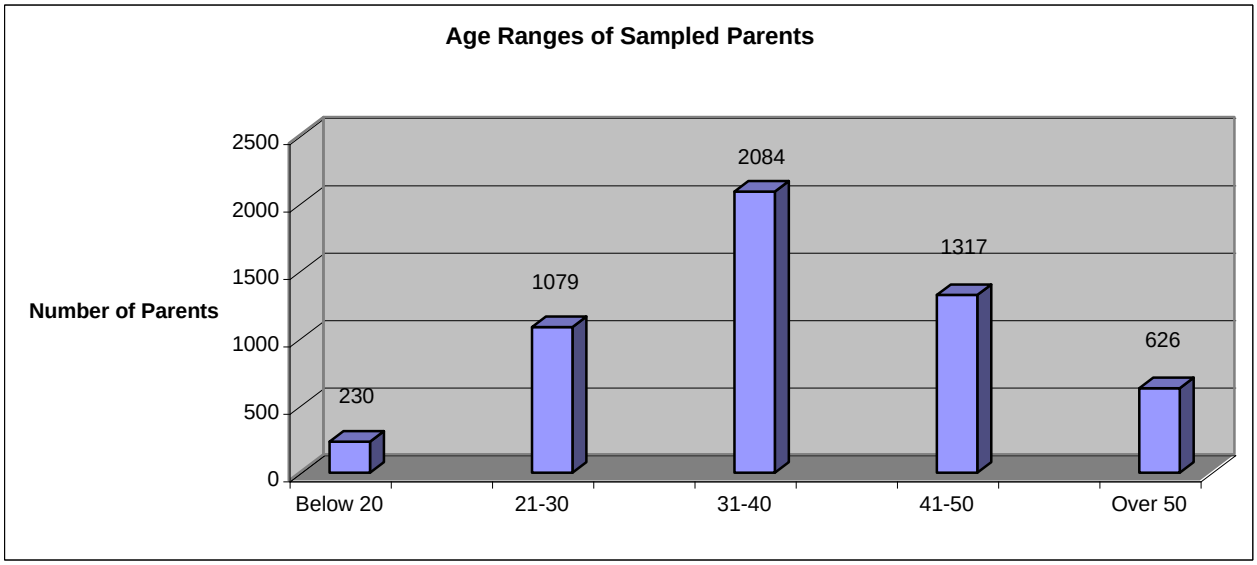
Marital Status	Relationship to Child			
	Father	Mother	Guardian	Non Relative Guardian
Single	93	1499	379	15
Married	575	1081	231	21
Cohabiting	120	457	139	4
Divorced	28	108	28	3
Separated	14	67	23	1
Widowed	35	149	48	6
Total	865	3361	848	50

Some of the guardians and non-relatives are single, while others are married, cohabiting, and a few divorced, separated or widowed.

Forty eight percent of the children are living with one of the parents who are the mothers in most cases.

3.2.3 Age Ranges of the Respondents

The age ranges of the respondents are presented in the chart below.



The largest number of respondents was parents who were 31 to 40 years old. This was followed by ages 41 to 50. It is to be noted that "parents" of age range below 20 would imply they got children at the age of 10 if the age of the children is 10! Caution is therefore urged in interpreting this chart since it is possible that the questionnaire in a few cases was filled by other siblings on behalf of the parents but put their ages instead of the ages of the parents or guardians.

One hundred and ten of the 230 'parents' who were under 20 years of age were single. It is within this group that older siblings could be found. It is also possible that among the 230, there are true guardians, even if they are not the parents.

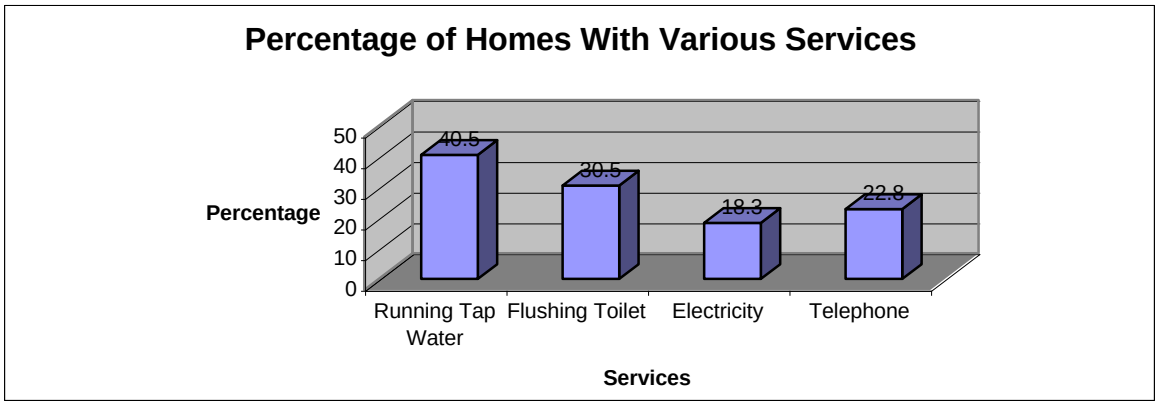
3.2.4 Household Sizes and School Going Children in the Homes

The average household size from the responses was 7.48. This indicates rather large household sizes. Household sizes of one to 10 captured 88.5% of the respondents.

The percentages of school-going boys living in the households of the respondents were basically the same as those of girls. The majority of the households have one to two boys or girls of school going age.

3.2.5 Services Provided in the Homes

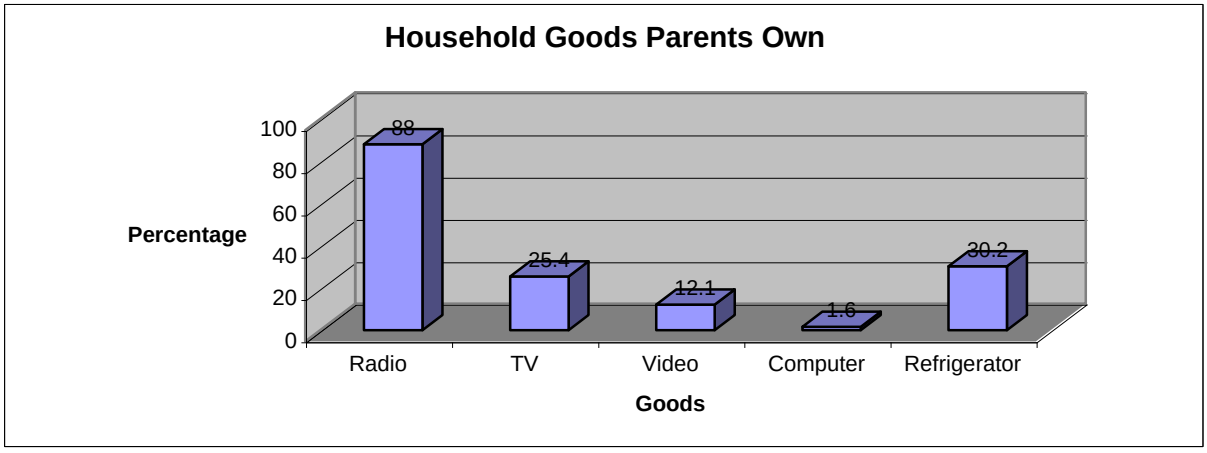
Parents were asked to indicate if they had certain services in the homes. The responses are summarized below.



Less than 50% of the homes have running tap water. Flushing toilets were available in 30.5% of the homes. Electricity, which would be convenient for pupils to do their homework, had the least frequency (18.3%). The telephone is a rare service, available to 22.8% of the homes.

3.2.6 Possession of Household Goods

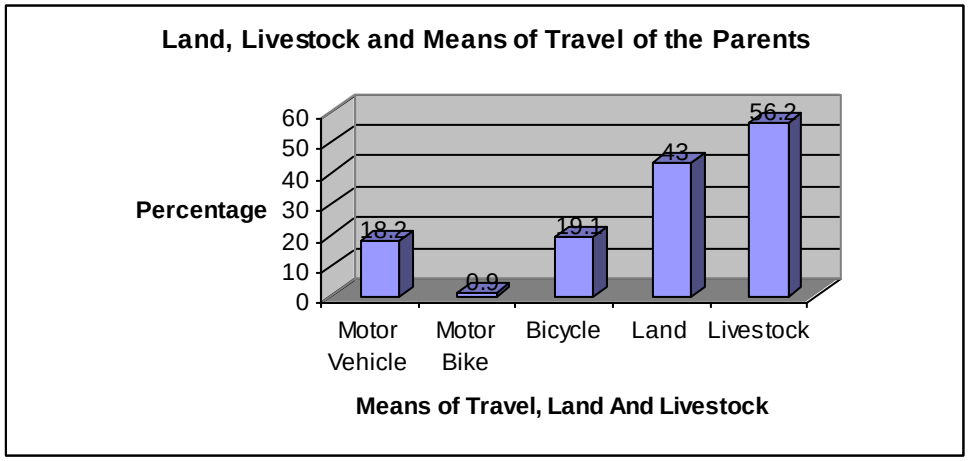
The parents reported on the household goods they have as depicted below.



Most homes (88%) have radios. This compares well with the 90.3% reported by the pupils. Thirty point two percent of the parents indicated they had refrigerators at home. The percentage of homes with videos is about half that of homes with television. Computers were the rarest (1.6).

3.2.7 Land, Livestock and Means of Travel of the Parents

Information on land, livestock and means of travel parents reported having is presented graphically below.



The percentage of parents with motor vehicles is small. This should not hinder the education of the pupils who mostly walk to school. Even bicycles are in only 19.1% of the homes.

Land is possessed by 43.0% of the parents. Livestock is a little more widespread, with 56.2% of them reporting they have. It can be a source of revenue which parents can use for buying scholastic materials for their children. However, the information below indicates livestock is not kept predominantly as a source of revenue.

3.2.8 Sources of Income

Parents indicated their main sources of income as reflected in table 10.

Table 10: The Main Sources of Income

Source of Income	Yes		No		Total	
	f	%	f	%	f	%
Salary/wage/pension	3135	57.9	2279	42.1	5414	100.0
Sale of livestock	964	18.0	4394	82.0	5358	100.0
Sale of farm produce	470	8.8	4879	91.2	5349	100.0
Own business	845	15.7	4535	84.3	5380	100.0

Public Support	345	6.4	5011	93.6	5356	100.0

The main source of income is salary or wage earning (57.9%). Livestock, which is possessed by a sizable number of families is a source of income for only 18.0% of the parents. A few (15.7%) have businesses and another 8.8% get income from sale of farm produce. Having livestock and land is therefore not a sign that a parent has funds.

The parents were asked to indicate whom in the family was working. It is mostly mothers (47.8%) of the sampled pupils who are working. The percentage of working fathers is 43. The percentage of working children ranges from 12.9% for child one to 3.4% for child four. This is to be expected since the parents are still mostly young and many of them will not have children who are old enough to be working. Hence, many households do not have wages or salaries to depend on.

3.2.9 What Children do After School Hours

The parents' responses to the question of what their children did after school hours indicated that after school children regularly help look after younger brothers and sisters and help their mothers with work. The proportion that does not help at all is lowest for mother, followed by looking after younger brothers and sisters. Table 11 presents the details.

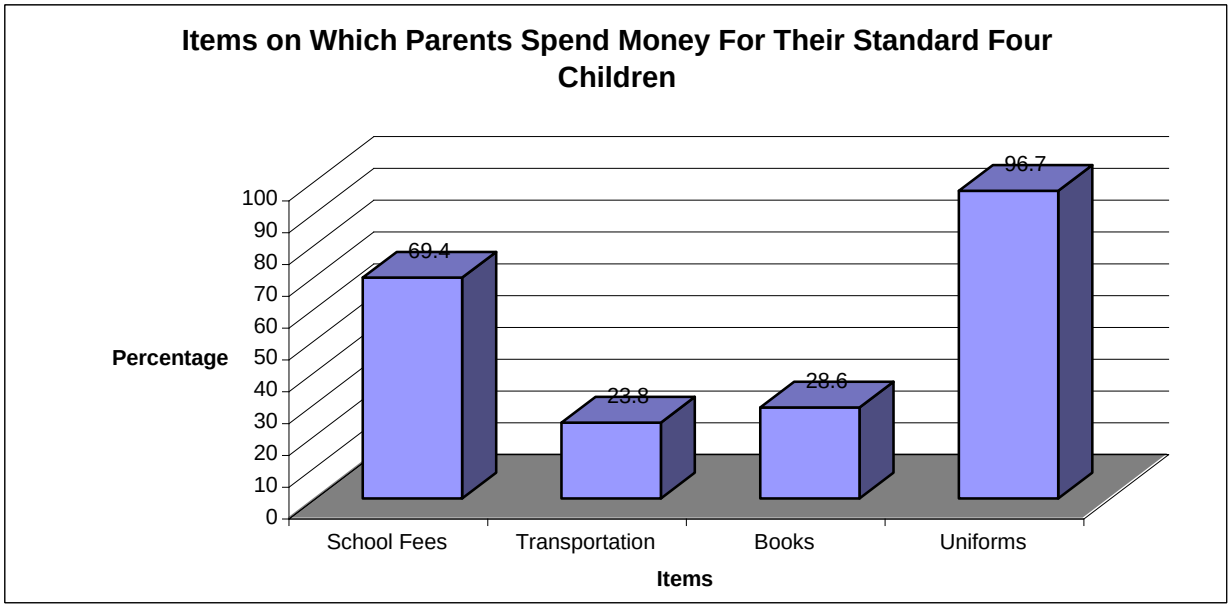
Table 11: What the Child Does After School Hours

Regularity	**What the Child Does After Work**					
	Helps look after younger brothers and sisters		Helps mother with her work		Helps father with his work	
	f	%	f	%	f	%
Regularly	1507	44.4	1642	41.6	588	24.2
Sometimes	1184	34.9	1950	49.4	870	35.8
Not at all	702	20.7	358	9.1	975	40.1
Total	3393	100.0	3950	100.0	2433	100.0

Looking after younger brothers and sisters could be regarded as helping mother with her work where such a role is taken as being the mother's. Hence the parents are agreeing with the pupils that the children spend time helping their parents, more particularly the mothers in their chores.

3.2.10 Items on Which Parents Spend Money for Their Standard Four Children

Items on which the parents spend money for their children in Standard Four are depicted below.



Sixty nine point four percent of the respondents indicated they spend money on school fees. It is noted that school fees have long been abolished in government/public schools which form the greater fraction of the sample. Perhaps parents lumped all charges, such as that for feeding, under school fees. Only 23.8% indicated they spend money on transportation. This is consistent with the fact that children live within short distances from schools and mostly walk to school. 28.6% reported that they spend money on books while 96.7% reported that they spend money on school uniforms.

91.5% reported that there were other expenses on which they spend money for their pupils in Standard Four.

The majority of the respondents (91.2%) indicated that their children never stayed at home because they could not afford any of the costs connected with sending the children to school.

3.2.11 Languages Spoken at Home

English is spoken sometimes in 55.5% of the homes, and not at all in 29.1% of the homes. 15.4% of the homes speak English always. Table 12 below summarizes the information.

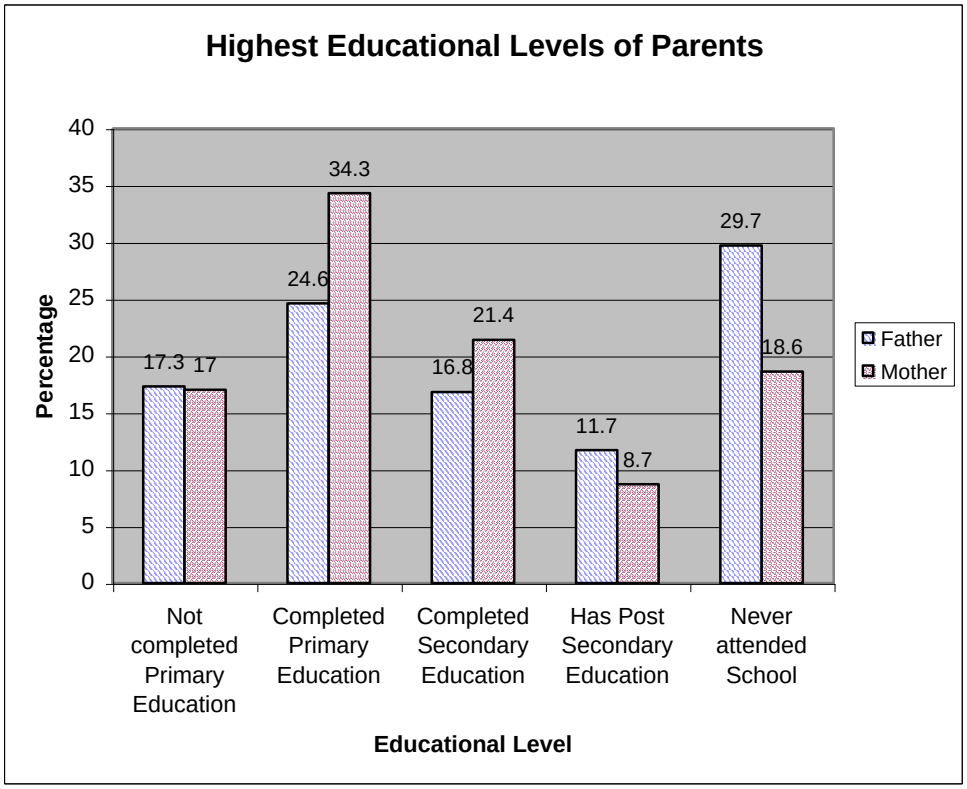
Table 12: Frequency of Speaking English and Mother Tongue in the Homes

Frequency of Speaking	English		Mother Tongue	
	n	%	n	%
Always	627	15.4	4736	92.2
Sometimes	2264	55.5	356	6.9
Not at all	1189	29.1	38	.7
Total	4082	100.0	5135	100.0

It is mother tongue that is spoken always in most homes (92.2%). There are very few homes where mother tongue is not spoken at all. The English that is taught as a subject therefore receives little reinforcement in the homes.

3.2.12 Parents' Highest Educational Levels

The chart below shows that the percentage of fathers who did not complete primary education is the same as that of the mothers (17.3 to 17%).



A higher percentage of fathers than mothers never attended school at all (29.7 % to 18.6%). More mothers in numbers as well as in percentage completed primary and secondary education compared to the fathers (34.3% to 24.6% and 21.4% to 16.8%

respectively). However, slightly more fathers than mothers attained post secondary education (11.7 to 8.7%).

3.2.13 Purchase of Newspapers

Twelve point four percent of the respondents buy newspapers daily while 20.2% of them do so weekly. 32.9% buy newspapers sometimes while 34.6% never buy any newspapers. Table 13 below summarises the information.

Table 13: Frequency of Purchase of Newspapers

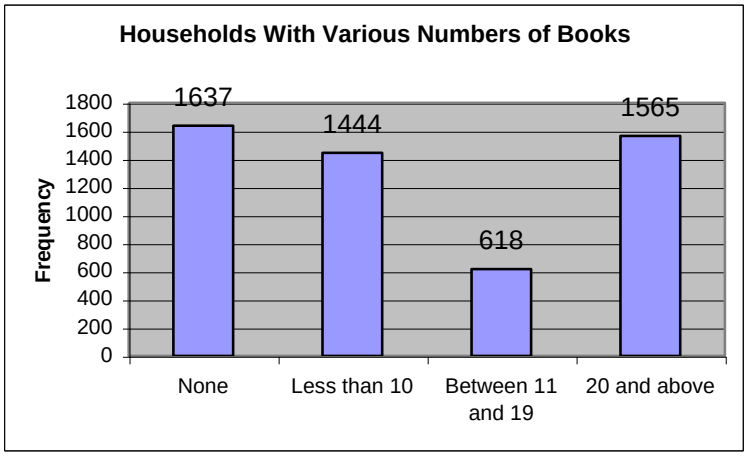
Purchase Frequency	n	%
Daily	652	12.4
Weekly	1062	20.2
Sometimes	1731	32.9
Never	1821	34.6

It is noted that the percentage of parents who never buy newspapers is comparable to the percentage of 37.2 supplied by the pupils. This lends support to the dependability of the information from the pupils.

The percentage of homes with newspapers to read is therefore small.

3.2.14 Number of Books in the Homes

The chart below indicates that over 3000 out of 5000 homes have either none or less than 10 books each. A few homes have between 11 and 19 books. Just below 30% of the homes have 20 or more books.



Only 13.7% of the respondents indicated that they were members of libraries. Reading materials are therefore rare in most homes.

3.2.15 Membership of School-going Children to Libraries

Out of those who responded to this item, 40.3 % (900 parents) had one child who was a member of a library. Another 28.8% had two and 16.4% had three children who were members of libraries. These three categories made up 85.5% of the respondents.

Most children are therefore not members of libraries, and so are their parents. The children of parents who did not respond to this item may mostly not be library members. This suggests that children do little reading at home.

3.2.16 Discussing Children's School Work and Participation in School Activities

Parents who discuss the progress of their children's work with the class teachers also tend to participate in school activities concerning their children. Table 14 below shows that 75.2% of the parents who regularly discuss the progress of the work of their children with the class teacher also participate in school activities regularly. 3.9% who discuss the progress of their children with the class teachers regularly do not participate in school activities connected with their children. The 20.9% who discuss with the teachers also tend to participate at least sometimes in school activities.

Table 14: Frequency of Discussing Progress Vs Participation in School Activities

Participation in School Activities	Discussing Pupil Progress With Class Teacher					
	Regularly		Sometimes		Not at all	
	n	Col %	n	Col %	n	Col %
Regularly	804	75.2	1119	36.6	228	20.2
Sometimes	223	20.9	1749	57.2	473	41.9
Not at all	42	3.9	188	6.2	429	38.0

It would appear that once a parent picks up interest in the progress of her child, she becomes more active in school activities involving the child.

3.2.17 Discussing School Work With the Child

The parents/guardians report that they regularly discuss schoolwork with the children regardless of whether these parents/guardians discuss such matters with the teachers. As reflected in table 15, the percentages of the parents who regularly discuss schoolwork

with the children are 89.5, 81.4, and 70.8, for parents/guardians who discuss schoolwork with the teachers regularly, sometimes and not at all, respectively.

Table 15: Numbers and Percentages of Parents /Guardians Who Discuss School Work With Their Children Regularly, Sometimes and Not at all

Discussion of School Work With child	Frequency of Discussion of School Work with Teacher					
	Regularly		Sometimes		Not at all	
	n	Col %	n	Col %	n	Col %
Regularly	959	89.5	2501	81.4	806	70.8
Sometimes	103	9.6	553	18.0	275	24.2
Not at all	9	.8	19	.6	57	5.0

Very few respondents reported that they did not discuss schoolwork with their children. There is therefore a strong relationship between discussing a child's schoolwork with the child and with the teacher. However, a substantial number of parents do not discuss their children's schoolwork with the teachers.

3.2.18 Helping Child With School Work

Table 16 below presents the regularity of helping children.

Table 16: Frequency of Helping Child With Schoolwork

Source of Help	**Regularity of Help**							
	Regularly		Sometimes		Not at All		Total	
	f	%	f	%	f	%	f	%
By mother	2076	62.3	1021	30.6	237	7.1	3334	100.0
By father	719	35.6	802	39.7	497	24.6	2018	100.0
By sister	1219	52.5	805	34.7	296	12.8	2320	100.0
By brother	753	40.3	753	40.3	363	19.4	1869	100.0
By other family	678	31.6	1005	46.8	463	21.6	2146	100.0
By friends/neighbours	203	14.7	567	41.1	609	44.2	1379	100.0

Up to 62.3% of the mothers help the children regularly and 30.6% help sometimes. Only 7.1% of the mothers do not help at all. From table 16, the various groups can be compared. Only 35.6% of the fathers help regularly, while up to 24.6% of them do not help at all. The percentage of sisters who help regularly is more than that of the fathers, while the percentage of sisters who do not help at all is 12.8.

Brothers do not help as much as the sisters since only 40.3% of them help regularly. The percentage of brothers that does not help at all is 19.4. Other family members also give considerable help, while friends or neighbors give the least help. Those of the latter who help regularly is 14.7%, while the friends or neighbors who do not help at all is 44.2%.

The data suggest that mothers and sisters in the households are the most supportive of the children's learning.

3.2.19 School Improvement Activities

Most parents indicated they attend school improvement activities as reflected in table 17

Table 17: Attendance of School Improvement Activities by Parents

Attendance	Frequency	Percent
Yes	3633	70.4
No	1528	29.6
Total	5161	100.0

Seventy point four percent of the parents attend to school improvement activities while 29.6% do not.

3.2.20 Value of Schooling

The last item on the instrument sought parents' opinions on a number of school issues. The frequencies are reflected in table 18 below.

Table 18: Parents' Views on Schooling of Their Children

Statement	**Frequency**	**Percentage**
Schools are Providing Good Education	4605	94.4
Having Good Idea of What a Child Must Become	2384	62.1
Would Still Keep a Child in School if I Won a Lot of Money	3997	96.2
More Important to Educate Boys Than Girls	463	11.7
Spending Money on Education is a Good Investment	4197	97.1

The parents generally agree that schools provide good education for their children (94.4%). They do not send their children to school merely as a way of looking for money as most of them (96.2%) believe that even if they won a lot of money they would still keep the children in school. They mostly disagree with the notion that it is more important to educate boys than girls (88.3%). They are of the opinion that spending money on

education is a good investment (97.1%). Most of them (62.1%) have a good idea of what their children should become.

3.2.21 Discussion of Parent's Responses

Most of the respondents to the Parents Questionnaire are mothers (65.5%). Most of these mothers are single (38.2%). The married mothers constituted 37.8%. Generally, it is the younger parents who are unmarried while the older ones are married. Much older mothers are widowed. Hence there are many children living with single, young mothers while some live with widowed mothers. Pupils living with both parents are few. This builds a picture of a number of homes where discipline can become a problem because of the absence of one parent to help out the other. This can be the case particularly since the average household size is large (7.48%) and the single mothers are young, including teenagers. The North Region had the largest percentage of teenage parents. Very young and single parents may not be able to provide homes that are conducive to children's achievements.

Some of the homes have amenities like tap water, fridge, and flush toilets. Hence some of the pupils live in environments that are health promoting, thereby providing a good foundation for education.

Amenities represent economic status of the household. Availability or lack of amenities is taken to represent the economic status or well being of a household and as such has a bearing on the educational success of the child. Of the five amenities mentioned, running tap water is the only service that is relatively widely available. Forty one percent of the households have access to running water. As for the remaining services (electricity, telephone, refrigerator and flushing toilet), as many as 70% of the households do not have access to them. Electricity, which is a key resource, is only available to 18% of the households. Conversely, 82% of the households do not have electricity. This does not support the doing of homework at night by the pupils.

Household goods are also a strong indicator of economic standing of the households which translate into a rich learning environment (or lack of) for the school going child. Eighty eight percent of the parents are in possession of a radio. Twenty five percent state that they have a TV but not all of the TV owning households own a Video machine. Video ownership stands at 12%. 98% of households also say that they do not have a computer. This means that 98% of the children will depend entirely on the school system to acquire computer skills and other aspects of information technology.

Land and livestock ownership should signal a source of income, but this is not the case.

Most (57.9%) of the parents depend on the salary as their main source of income. A smaller number (42.1%) of them state that they do not depend on the salary for sustenance. Income from the sale of livestock sustains 18% of the households, meaning that 82% are not maintained through livestock sales. Only 8.8% derive income from sale of produce. These figures suggest that a good proportion of households derive sustenance neither from salary nor from livestock. However, jobs remain the main source of income as livestock seems not to be owned for generating income. It is mostly mothers and fathers with jobs, but less than 50% of them have jobs. Only a few homes have children who completed secondary education and may get jobs and bring money home. This implies that a large proportion of the households have difficulties raising income. This could affect the education of their children since they cannot afford the amenities and household goods that may promote learning.

Parents indicated their expenditure on transporting the children was low. This tallies with the report of most children that they walk to school.

The response from parents that they spend money on school fees should be referring to other charges since school fees in public schools were abolished. In any case, no parent reported that his/her child stays at home because of lack of money for fees.

There are some of the fathers who never went to school at all. Up to 70% of both fathers and mothers had no, or only completed, primary education. This means most of the parents cannot get jobs, the major source of income. With little income, they cannot afford the goods and amenities that would be supportive of children's learning. This leaves the school as the major or only source of promoting academic achievement.

With parents who have no education or only completed primary education, it comes as no surprise that only 12.4% of the sampled parents buy newspapers daily. The habit of reading has to be cultivated. Parents with no or very little formal education may not have internalized the value of reading to maintain or raise their children's performance. That most parents are not members of any library is therefore explainable. A primary school leaver may not have internalized the values of reading. He may therefore resort to listening to radio and watching TV as the only sources of knowledge and information.

3.2.22 Policy Implications of parent Responses

1. Arising from this section is the finding that a lot of the parents are young, some of them being teenagers. Most of the young parents are single. These cannot be expected to provide conducive conditions for the development of their children. The solution to the problem is multisectoral. Teenagers should in the first place be in school and then those with children need to be assisted to rise up. Social action programmes are needed to address the issue of young mothers.

2. It is gratifying that parents help their children with their schoolwork. It is, however, mostly mothers who help their children. Sisters and brothers also lend a hand, but very few of the fathers help. Ways need to be found to encourage fathers, few though they are, to take more active role in the education of their children.

3. Parents believe schools are good. Schools are doing a good job of educating the children. Even if they won a lot of money, parents would still keep their children in school because of the value of education. This will of the parents to educate their children should be made more of a reality by finding ways to interest all parents in all educational activities of their children. Parent support services should be included in the school guidance programmes.

4. Reading materials are scarce in the homes. Libraries are not used much. Reading materials would therefore mostly be expected to be found in schools. The more readers there are in school, the better it is for improving the reading competency of the pupils.

5. Dependence on salaries as the means of income reduces the ability of the parents to provide more for the education of their children. With little education, getting good jobs is hard. Parents should be encouraged to diversify their sources of income, particularly from livestock, and from produce for those who have arable land.

6. During the phase of expanding educational opportunities for children, some libraries were converted into classrooms. These should be replaced and stocked with appropriate books.

3.3 Background Information Supplied by Headteachers

Headteachers of the sampled schools filled a questionnaire which elicited information about themselves, the schools, teachers and the pupils. The results of the major points are presented below.

3.3.1 Results From the Headteacher Questionnaire

Responses were received from 68 Headteachers, 52.2% of whom were female and 47.8% were males. One did not indicate the sex. The mean age of the headteachers was 50.24, the oldest being 64 and the youngest 36. The headteachers are therefore mature men and women. The Headteachers have had considerable numbers of years of administration. The mean years of administrative experience in the current school for the 64 Headteachers who responded to this item is 5.72. In previous schools, the mean years of experience of the 42 who responded to this item is 9.17. With over 14 years of school administration, the headteachers should know how to run the schools so as to enhance learning.

3.3.2 Highest Academic Educational Levels of the Headteachers

The academic educational background of the Headteachers is presented in table 19 below.

Table 19: The Highest Academic Educational Levels Reached by Headteachers

Educational Level	SEX			
	MALE		FEMALE	
	n	%	n	%
Primary	15	48.4	14	42.4
Secondary	13	41.9	18	54.5
University Degree	1	3.2		
Post Graduate	1	3.2		
Other	1	3.2	1	3.0
Total	31	100.0	33	100.0

The percentages of the males and females who completed primary and secondary education are about the same (90.3% Vs 96.9%). One each of the male Headteachers reported they had University degree and Postgraduate training, respectively. Up to secondary level, the female headteachers seem to be more than the males, but from graduate and beyond, the male headteachers are more than the female headteachers.

3.3.3 Qualifications of the Teachers

Female teachers are more numerous in the schools, whether qualified or unqualified, than their male counterparts. Overall, the mean female teachers in the schools is 14.69 and that of the males is 3.72, giving a ratio of one male teacher to 3.9 female teachers. Among the qualified, the ratio of male to female teachers is 1 to 4.4 and for the unqualified it is one to 1.3

In Standard Four alone, the mean number of qualified male teachers is 1.26 compared to the female qualified teachers of 2.26. The unqualified male teachers at this level are, based on the thirteen schools that indicated, a little more than the unqualified female teachers (means of 1.23 and 1.08, respectively). The ratio of male to female teachers at this level is one to 1.85.

3.3.4 Attendance of In – service Courses by Teachers

Teachers maintain and improve on their skills through in-service courses. The numbers of schools with various categories of external and school based courses are presented in table 20 below. External courses are sometimes attended (69.8%). A few schools (19.0%) always attend such external courses. The Headteachers indicated their teachers always or sometimes attend internal courses (48.5% each).

Table 20: Frequency with Which Teachers Attend In-service Courses

Frequency of Attendance	External		School Based	
	n	%	n	%
Not at all	2	3.2	1	1.5
Hardly	5	7.9	1	1.5
Sometimes	44	69.8	32	48.5
Always	12	19.0	32	48.5
Total	63	100.0	66	100.0

This arrangement of school-based and external courses should serve to impart more skills to the teachers.

3.3.5 Teacher Absenteeism

Teachers may sometimes absent themselves from school. The item on the extent of teacher absenteeism was responded to by the head teachers as presented at table 21 below.

Table 21 a: The Extent of Teacher Absenteeism

The whole School		
Absenteeism	Frequency	Percent
Not at all	4	6.3
Hardly	20	31.3
Sometimes	34	53.1
Always	6	9.4
Total	64	100.0

Table 21 b: The Extent of Standard Four Teacher Absenteeism

Standard Four Teachers		
Absenteeism	Frequency	Percent
Not at all	11	16.7
Hardly	21	31.8
Sometimes	29	43.9
Always	5	7.6
Total	66	100.0

The percentage of schools where teachers of Standard Four classes are always or sometimes absent is less than that in the entire school (51.5 to 62.5). The net result is that the percentage of schools with Standard Four teachers who are hardly or not absent at all is more than that in the entire school (48.5% to 37.6%). However, 43.9% or 53.1% of the teachers being 'absent sometimes' fails the implementation of the curriculum. Pupils cannot learn when there are no teachers.

3.3.6 Location of Schools

Most of the Headteachers (43) reported their schools as being in either rural or remote rural areas. Urban schools were 13 and semi-urban were 11. The distribution of the responding schools is shown in table 22 below.

Table 22: Distribution of Schools by Location and Region

Region	School Location				Total
	Urban	Semi Urban	Rural	Remote Rural	
West	1		2	3	6
South	2	2	6	4	14
Central North	3	1	7		11
South Central	5	2	4	5	16
Central South		5	7	1	13
North	2	1	2	2	7
Total	13	11	28	15	67

Each region has at least a school in each category of location, except that Central North did not indicate any school as located in the remote rural area and Central South had no urban school.

3.3.7 School Founding Years

The founding years of the 60 schools that responded to this item are indicated in Appendix III. Prior to independence, by 1964, only 25% of these schools were in existence. Another 20% were added between 1967 and 1977. The next ten years, however, saw an additional 40% of the schools established, reflecting implementation of the first National Policy on Education. By 1989, 85% of the schools were established. The growth rate slowed down within the next six years. The latest school in the sample was founded in 1995.

3.3.8 School Foundations

Eighty four point eight percent of the schools are public/government founded. Government subsidizes another 10.6%, and only 4.5% are private or non-governmental schools as shown in table 23below.

Table 23: Ownership of the Schools Sampled

Ownership	Frequency	Percent
Government/Public	56	84.8
Private/Non Government	3	4.5
Government Subsidized	7	10.6
Total	66	100.0

3.3.9 School Enrolment

The mean enrolment for boys and girls are 254.8 and 257, respectively. The minimum enrolment reported for boys was 45 while for girls it was 51. Similarly, the maximum enrolment reported was 541 and 591 for boys and girls, respectively.

Table 24 presents summary enrolment and number of streams for Standard Four only.

Table 24: Summary of Total Enrolment and Number of Streams in Standard Four

Summary Statistics	Enrolment	Number of Streams
Mean	88.27	2.54
Minimum	12	1

Maximum	645	5

The statistics indicate 35 pupils per class or stream (88.27/2.54).

3.3.10 Availability of Classrooms

The number of classrooms per standard is summarized in table 25 below:

Table 25: Summary Statistics on the Number of Classrooms Per Standard

	STANDARD						
	1	2	3	4	5	6	7
n	66	63	57	61	60	65	66
Mean	2.38	1.70	1.65	1.93	1.92	2	2.30
Minimum	1	1	1	1	1	1	1
Maximum	5	4	4	4	4	4	5

Standard one tends to have the largest number of classrooms (2.38). Standards Two to Five average below two, but Standards Six and Seven average two and 2.3 classrooms, respectively. The minimum for each Standard is one and the maximum sampled is five, occurring in Standards One and Seven. The number of pupils per Standard Four classroom is therefore about 46 (88.27/1.93). This implies that one classroom is accommodating more than one stream or class, since the average size of a stream is 35 in these data. Some streams/classes should therefore be sharing rooms or attending lessons in outdoor locations.

3.3.11 Special Rooms

Apart from classrooms, schools normally have rooms used for other purposes. The following are the percentages of headteachers who indicated having the rooms listed in the table below.

Table 26: Percentages of Headteachers Who Reported Having Special Rooms as Listed in the Table

Purpose of Special Room	**Percentage Having**
Staff Room	74.2
Special Rooms (e.g. music, art)	3.2
Workshop Room	4.9
Libraries	16.1
Storeroom	85.7
Boarding Facilities	3.2

Others	23.9

Most schools have staff rooms and storerooms. However, special rooms for music, workshop room, boarding facilities and libraries are lacking from most of the schools.

3.3.12 Ventilation and Lighting

Ventilation and lighting are important in working places, particularly in classrooms. In table 27 below, 58 headteachers reported adequate ventilation. Five of these reported inadequate lighting. Again, 58 headteachers reported adequate lighting, compared to 10 who reported inadequate lighting. There was a strong association between lighting and ventilation.

Table 27: The Adequacy of Ventilation and Lighting in Classrooms

Ventilation	Light		Total
	Inadequate	Adequate	
Inadequate	5	5	10
Adequate	5	53	58
Total	10	58	68

The small percentage of schools without adequate ventilation and/or lighting are not providing suitable learning environments.

3.3.13 Adequacy of Various Facilities

It is reflected in table 28 that 13.4% of the schools did not have playgrounds. Forty one point eight percent of the schools indicated that the playgrounds they had were inadequate while 44.8 showed that they had adequate playgrounds. 13.6% of the schools do not have any sports equipment at all, while the very same percentage of the headteachers responded that they had adequate sports equipment. 72.7% of the schools had inadequate sports equipment.

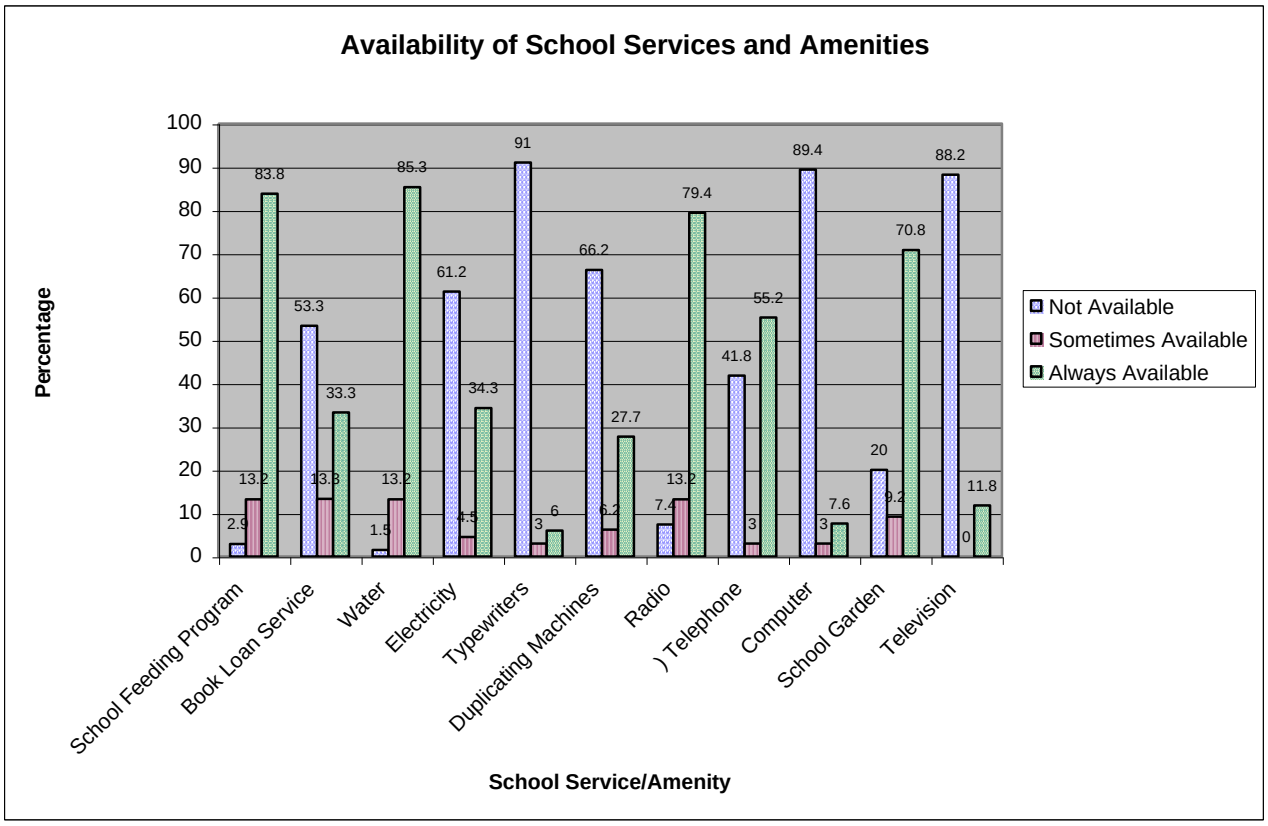
Table 28: Adequacy of Various Facilities in the Schools

Adequacy Status	**Facility**					
	Playgrounds		Sports Equipment		Agricultural Land	
	Frequency	%	Frequency	%	Frequency	%
Not Available	9	13.4	9	13.6	18	28.1
Inadequate	28	41.8	48	72.7	21	32.8
Adequate	30	44.8	9	13.6	25	39.1
Total	67	100.0	66	100.0	64	100.0

Adequate Agricultural land is possessed by 39.1% of the schools. 28.1% of the schools have no agricultural field at all while 32.8% of the schools have inadequate agricultural land. Inadequate sports equipment and playgrounds implies some pupils could be inactive during recreational time.

3.3.14 School Services and Facilities

Schools offer various services and amenities. The chart below shows the responses of the headteachers as to the availability of services and amenities.



School feeding programme is available in 83.8% of the schools. Only 2.9% of the schools have no feeding programme at all. Book loan service is not available in 53.3% of the schools. 33.3% of schools have book loan services available always.

Water is always available in 85.3% of the schools. However, 1.5% of them do not have water at all. 61.2% of the schools do not have electricity. However, 34.3% of the schools always have electricity. In a similar way, 91.0% of the schools have no typewriters. It is only 6% of the schools that always have typewriters.

Duplicating machines are not available in 66.2% of the schools. 27.7% of the schools, however, always have duplicating machines. Radios are always available in 79.4% of the schools. 7.4% of the schools do not have this amenity at all. Schools are nearly divided equally in terms of the presence of telephone services. 41.8% of them always have no telephone service while 55.2% always have.

Computers are rare in the schools. 89.4% do not have computers at all. Only 7.6% have computers always, while 3% have it sometimes. This is comparable to the responses of the pupils where 7.1% of them said they had computers at home. Gardens are always available in 70.8% of the schools. There are 20% of the schools that have no school gardens at all. Televisions are not available at all in 88.2% of the schools. 11.8% of the schools always have television.

3.3.15 Toilet Facilities

Proper toilets are essential to the promotion of health in schools. Headteachers were asked to indicate the number of toilets of each type available in their schools. The mean number of each type of toilet for the schools indicating they have is portrayed in table 29 below.

Table 29: Availability of Toilet Facilities

Type of Toilet	**Teachers**				**Pupils**			
	Male		Female		Male		Female	
	n	Mean	n	mean	n	mean	n	mean
Flush toilets	34	1.62	34	1.97	30	6.87	30	8.73
Ventilated pit latrines	22	1.45	21	1.48	34	3.38	35	3.51
Unventilated pit latrines	8	1.75	8	1.13	15	5.4	14	5.43
Bucket toilets	1	2.00	1	2.00	1	1.00	1	2.00

There is at least one toilet facility for male and one for female teachers in the responding schools. Toilet facilities for pupils are similarly designated for males and females. Where available, the mean number of flush toilets tend to be more than the mean number of the other types of toilets/latrines.

Flush toilets range from a minimum of one for pupils and teachers to a maximum of six for male teachers, eight for female teachers, 15 for male pupils and 30 for female pupils. Ventilated pit latrines also have a minimum of one for teachers and pupils, and maxima of 4 for male teachers, three for female teachers, nine for male pupils, and eight for female pupils. The unventilated pit latrines range from minima of one for teachers and pupils to maxima of six, two, 14, and 14 for male and female teachers and for male and female pupils, respectively.

Toilet facilities therefore seem to be moderate in the schools, with a ratio of a toilet to 18 pupils.

3.3.16 Medical Facilities

There is a medical facility within 3km from most of the schools as reflected in table 30 below.

Table 30: Distances from School to the Nearest Medical Facility

	Frequency	Percent
Below 1 km	36	53.7
1-3 km	23	34.3
3-5 km	2	3.0
Above 5 km	6	9.0
Total	67	100.0

Fifty three point seven percent of the schools are within 1km from a medical facility. Another 34.3% are within 3km from medical facilities and 9% of the schools are over 5km away from medical facilities. Teachers and pupils in most schools can therefore get to a medical facility quickly.

3.3.17 Availability of Security Facilities

Security facilities are not as near to schools as medical facilities are. Table 31 shows that 20.6% of the schools are within one km from security facilities. Another 30.9% are within 3km away. Up to 36.8% of the schools are more than 5km away from security facilities.

Table 31: Distances From Schools to the Nearest Security Facilities

	Frequency	Percent
Below 1 km	14	20.6
1-3 km	21	30.9
3-5 km	8	11.8
Above 5 km	25	36.8
Total	68	100.0

Headteachers tended to rate the security of their school environments as fair (52.2%) though 20.9% rated the security of their school environments as good. As shown in table 32, 26.9% rated the security of their school environments as poor.

Table 32: Headteachers' Rating of Their School Safety

	Frequency	Percent
Poor	18	26.9
Fair	35	52.2
Good	14	20.9
Total	67	100.0

Where there is insecurity of materials and/or person, learning cannot be effective.

3.3.18 Security Measures

Schools may have certain provisions to enhance their security. Some of the security measures are listed in the table below.

Table 33: Security Measures

Measures	**Respondents**	**Effectiveness of Measures**			
		Good	Fair	Poor	Not present
Boundary wall/fence	67	43.3	34.3	11.9	10.4
Security guard/service	67	28.4	20.9	11.9	38.8
Fire extinguisher	68	16.2	5.9	0.0	77.9
First aid box	68	19.1	57.4	0.0	23.5
Alarm system	68	10.3	4.4	1.5	83.8

Most schools have boundary wall fences in good or fair condition. Ten point four percent of the schools have no boundary fence at all. Another eleven point nine percent of the schools have the walls/fences in poor condition. Security guard services are not engaged at all by 38.8% of the schools. 11.9% of the schools have poor guards. 28.4% of the schools have good security guard services. 77.9% of the schools have no fire extinguishers at all. Only 16.2% of the schools have good fire extinguishers. 19.1% of the schools have good first aid boxes, while 57.4% have fair ones. 23.5% have no first aid boxes at all. Like fire extinguishers, alarm systems are not common in schools as 83.8% of the schools have no alarm system at all. 10.3% have alarm system in good condition.

3.3.19 Frequency of Abuses in Schools

Headteachers were asked to rate the frequency of certain practices in their schools. Their responses are summarized in table 34 below.

Table 34: Frequency of Undesirable Practices in Schools

Practice	**Respondents**	**Percentage**

		Frequent	Infrequent	Not at all
Physical abuse of teachers	67	1.5	17.9	80.6
Physical abuse of pupils	67	4.5	41.8	53.7
Drug abuse	67	3.0	16.4	80.6
Vandalism	67	3.0	29.9	67.2
Theft/Break-ins	65	13.8	60.0	26.2
Sexual abuse	67	4.5	17.9	77.6
Abductions	67	0.0	9.0	91.0

Abductions are the least frequent malpractice, with 91% of the headteachers reporting no occurrence at all. This is followed by physical abuse of teachers, where 80.6% of the headteachers report no incidences at all and only 1.5% reported the practice is frequent. Drug abuse is of the same magnitude, but 3% of the headteachers report frequent occurrences. Vandalism does occur, but 67.2% of the headteachers report no incidences of them at all. Physical abuse of pupils is common as 53.7% of the headteachers report no incidences at all. 4.5% report that the practice is frequent. In a similar way, 4.5% of the headteachers report frequent sexual abuse. Theft is apparently the most common of the practices as only 26.2% of the headteachers report no incidences at all, while 13.8% report frequent incidences and 60% report infrequent incidences.

3.3.20 Visits to Schools Over a Number of Years

School inspectors visited many of the schools between 1994 and 1999. Table 35presents the details.

Table 35: Number of Schools Visited Per Year

	Frequency	Percent
1994	1	1.6
1995	1	1.6
1996	9	14.5
1997	9	14.5
1998	18	29.0
1999	24	38.7
Total	62	100.0

Up to 67.7% of the schools were visited by school inspectors within 1998 and 1999. Only two schools were last visited within 1994 and 1995. Hence there was an improvement in the frequency of visiting the schools.

Many of the responding schools were visited at least once during the previous year. Assessing teachers, giving them guidance and making general inspection were the main purposes of visits to various schools.

3.3.21 Summary of Headteacher Questionnaire

The female headteachers were slightly more than the male headteachers in the sample (52.2 to 47.8%). The headteachers are mature men and women who should have a lot of administrative experiences. These experiences should help them to run schools effectively.

A rather large percentage of the headteachers reported having only primary education as the highest academic qualification. It is hoped that they work harmoniously with the younger teachers who may have secondary or even post secondary education. The female headteachers had more of secondary education than the male headteachers.

In their report the headteachers indicated more females than male teachers on the staff. The ratio of qualified male to female teachers is 1:4.4. The unqualified male to female teachers is 1:1.3

Teachers attend external and internal seminars from time to time. Such in-servicing should result in improving the instructional efficiency of the teachers. The schools are old enough and should have a lot of experience in guiding the children to do their best in schools. Most of the schools were established after independence was attained. 55% of the sampled schools were established after 1977, pointing to the success of implementation of the policy of making education accessible to a larger population. Otherwise, most of the schools have now operated for at least five years and should therefore have experience to maximize the learning of the children.

Book loan facilities are not universally available. Lack of library facilities could retard learning as learning is very much facilitated by a reading culture. Only 16.1% of the headteachers reported they had libraries. 53.3% of the headteachers report that books are not available.

Some schools experience teacher absenteeism ‘always’ and a large number experience such absenteeism ‘sometimes’. Absenteeism would have a negative effect on the learners because there would be no one to guide the pupils.

Over 50% of the schools classify themselves as located in Rural or Remote Rural areas. There is a tendency of urban schools doing better than rural schools. This phenomenon will be checked later when performance on the tests is being considered.

The estimated class size is 35 to 46 pupils. Where intensive remedial work has to be given according to the need of each pupil, it can become unmanageable by one teacher.

Children need room for playing. 44.8% of the headteachers reported they had adequate playgrounds while 41.8 had a cry of inadequate playground. 72.7% indicated that they had inadequate sports equipment.

Learning cannot take place effectively when the child is hungry. Availability of food and water should be a bonus for effective learning. School meals therefore come in to play a big role. 83.8% of the schools have a feeding programme all the time. Further, 85.3% of the schools report they have water all the time. However 1.5% of the schools reported they had no water.

Supply of electricity can facilitate many activities in a school. 61.2% of the schools reported they had no electricity. The implication is that any equipment requiring power cannot operate.

Most schools are day schools. Without electricity at home, doing homework at night can become a problem. In the same way it would be difficult for the pupils to cultivate reading culture at home.

Duplicating machines have been reported as facilitating teaching and learning. The production of hand – outs, the preparation of tests, etc, are assisted greatly when there is a duplicating machine in a school. 66.2% of the schools reported they did not have duplicating machines. This would tend to hinder the production of handouts for pupils.

Where school broadcasts are used as part of lesson transmission, availability of a radio is a help. 79.4% of the schools reported having radios.

A learning environment should be health promoting. The presence of good latrines is one indicator of a health promoting school. The schools sampled had adequate latrines, including flush toilets in some schools.

Most of the schools are within 3km from a health facility. Only 9% of the schools are located more than 5km from a medical facility. Illness of pupils can therefore be attended to easily in most schools.

Headteachers, like pupils, report that schools are not far away from where they live. Most teachers also live within 1km from the schools. Traveling is therefore not a burden on pupils and teachers.

School climates are relatively mild. Teacher abuse is not frequent. There is infrequent pupil abuse. A further 4.5% of the schools report frequent pupil abuse. Sexual abuse is reported to be infrequent in 17.9% of the schools. Such cases need attention so as to remove obstacles on the way of teaching and learning.

In general, the headteachers reflect schools where learning can take place, with problems here and there that would help learning if they were removed.

3.3.22 Policy Implications From Headteacher Background Information

1. A few graduate headteachers were in the sample. The implication is that a teacher with higher training would be willing to work in primary schools. It may be fitting to compare the effectiveness of Headteachers whose highest academic qualification was primary and those who went further with their academic education.

2. There must be some societal reasons why the teaching force is manned predominantly by female teachers. A deliberate attempt should be made to attract more males into the profession. Since a good number of the parents are single mothers, more male teachers would increase the 'father' image in schools.

3. Teacher absenteeism seems to be a problem. There are up to 50% of the schools reporting teacher absenteeism as "Always" or "Sometimes". Where there is no teacher to guide these very young pupils, very little learning takes place. Teachers who are described as 'always' absent may not teach effectively when they come. The indication is that supervision should be tighter on absenteeism.

4. The percentage of headteachers who reported frequent or infrequent pupil abuse is 46.3%. This is quite high. Sexual abuse is reported by 22.3% of the headteachers. Surely learning cannot take place meaningfully when the children who are to learn are being abused. Stern measures need to be taken against such offenders, be they teachers or not. Teacher abuse and drug abuse are reported to be on a small scale. It would not be against learning to try to control such cases wherever they can be detected.

5. In order to maximize gains from remedial efforts, class sizes should not exceed 30. Otherwise a teacher can get so stretched out that he/she ends up giving superficial help rather than in-depth attention to each pupil according to need.

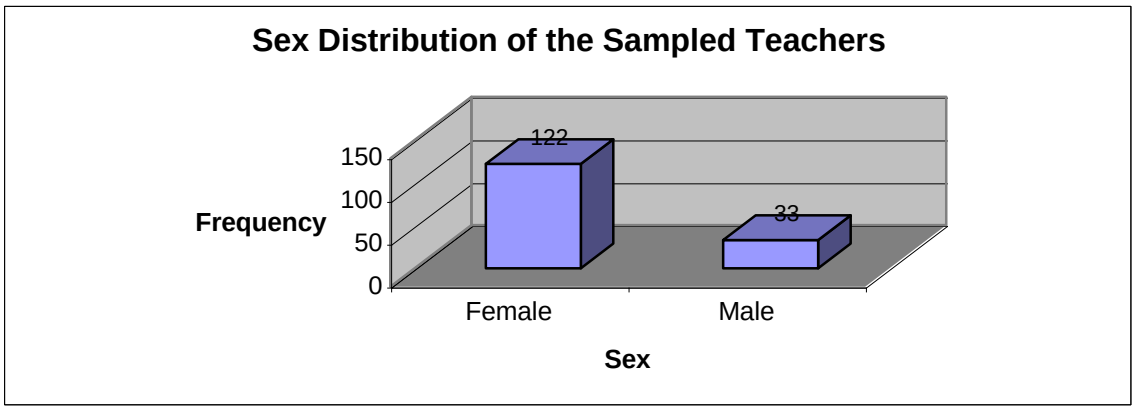
6. Guidance and Counseling programme needs to be intensified in all schools to cater for the needs of pupils and teachers.

3.4 Background Information Obtained From Teachers

Teachers are in touch with the pupils on all school days. They give instruction to the children and are the major vehicle for imparting knowledge to the children. Background information obtained from the teachers is therefore captured here.

3.4.1 Sex Distribution of the Sampled Teachers

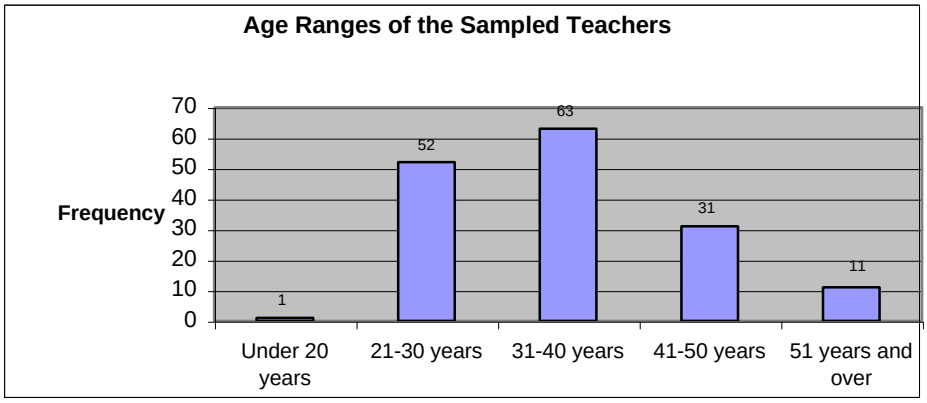
One hundred and fifty nine Standard Four teachers responded to the instrument. 122 of them were female and 33 were male. Four did not indicate their sexes.



The high percentage of female teachers here reinforce the earlier statistics obtained from Headteachers that the majority of teachers are females. From the responding sample here, the ratio of male to female Standard Four teachers is 1:3.7.

3.4.2 Age Ranges of the Sampled Teachers

The chart below indicates the age ranges of the sampled teachers.



The largest age group is 31-40 years (39.9%), followed by 21-30 years (32.9%) and then 41-50 (18.5%). Only one teacher indicated the age as being under 20 years. The very old (51 and over) were few (7.0%).

3.4.3 Highest Academic Educational Levels of the Teachers

A high number (40.6) of the teachers completed secondary education. Fourteen point eight percent of the teachers had 2 years of post secondary education while 25.2% had three years of post secondary education. A few (11.6%) completed only primary education. Table 36 summarizes the teachers' educational qualifications.

Table 36: Highest Academic Educational Levels of the Teachers in the Sample

	Frequency	Percent
Primary	18	11.6
Secondary	63	40.6
1 year post secondary	0	0.0
2 years post secondary	23	14.8
3 years post secondary	39	25.2
4 or more years post secondary	12	7.7
Total	155	100.0

Training for the teachers had variable lengths. Eight teachers indicated that they took one year to train for the teacher's certificate. 105 (83.3% of those who responded to this item) indicated that they took two years.

Most (95%) did not indicate that they had training for a teacher's diploma. Three teachers indicated that they took four years to get education degree.

3.4.4 Teaching Experiences of the Teachers

The table below gives a summary of the teaching experiences of the teachers.

Table 37: Teaching Experiences of the Teachers

	Whole Teaching career	Teaching Standard Four	Teaching in the Current School
n	150	151	155
Mean	11.03	2.59	4.18
Minimum	1	.08	.00
Maximum	40	12	21

The mean number of years of teaching experiences of the teachers is 11.03. The respondents have had a mean year of 2.59 for teaching Standard Four and 4.18 for teaching in their current schools. A minimum of one year, zero year, eight hundredth of a year and zero year were reported for the entire teaching career, teaching Standard Four and for teaching in the current school. The maximum number of years of teaching reported was 40.

3.4.5 Medium Of Instruction

The language of instruction is predominantly English, with 123 of them indicating that they use English for teaching, 53 indicating that they use mother tongue and 7 indicating use of other languages. The National Commission on Education (1993, p115) recommended explicitly that the change from Setswana to English as the medium of instruction should be implemented in Standard Four from 1995. This seems to be what the teachers are following.

3.4.6 Number of Grades Per Classroom

90.7% teachers indicated that only one grade is taught in one classroom compared to 9.3% who responded that they teach more than one grade in one classroom. There seems to be some sharing of classrooms. 44.6% of the teachers reported that their pupils share classrooms with pupils of other classes.

3.4.7 Classroom Facilities and Learning Aids

Most classrooms have a chalkboard (96.8%), teacher's chair (82.3%), teacher's table (78.7%), pupils' desks (91.6), and pupils' chairs/benches (92.9) It is storage cupboards which are lacking from some (47.4%) of the schools. Most (66.0%) of the classrooms have no electricity. 21.9% of the teachers report the availability of Numeracy Teachers' Guides, with 35.2% of them being in good condition. 40.2% of the respondents agree that the contents of the Guides are appropriate.

Teachers Guide for Reading Book in Home Language is reported present by 55.0% of the teachers. These Guides are reported as being in good condition by 50% of the respondents. 62.9% of them believe that the contents of the Guides are appropriate.

Guides to Reading Books in English are reported present by 80.1% of the teachers. 63.9% of the teachers believe the Guides are in good condition and 75.9% of them report the contents as appropriate.

Teaching Guides to General Studies are reported present by 51.4% of the teachers, 56.3% of who report the Guides as being in good condition. 55.9% of them agree that the contents of the Guides are relevant.

Learning materials are reported available in most classrooms as follows:

Chalk	94.9%
Teacher made wall-chart	86.0%
Pupil-made wall charts	81,2%
Commercial wall charts	41.2%
Aids from the environment	77.1%

98.1% of the teachers reported that children have exercise books to write in.

The teachers reported low access to the teaching aids listed below:

Duplicating machine	32.0%
Photocopier	17.8%
Computer	8.1%
Typewriter	10.8%

The percentages of teachers who responded and indicated they have access to various professional services are as follows:

Teacher resource Centre	58.0
Library	64.7
Teacher College of Education	34.0

A few other services were cited, but by very few of the teachers.

3.4.8 Observation of Teachers by Their Supervisors

The frequency with which teachers' teachings are observed by their immediate supervisors is given in table 38 below. 77.2% of the teachers report that their lessons are observed at least three times a year. This should help keep teachers in check, particularly if the observations are impromptu.

Table 38: Frequency With Which Teachers', Teaching Are Observed by their Immediate Supervisors

Observation Frequencies	Frequency	Percent
Once a year	13	8.2
Twice a year	23	14.6
At least three times a year	122	77.2

Total	158	100.0

On visits by inspectors, 35.3% of teachers indicated that they were visited this year while 29.5% were visited last year.

3.4.9 Teacher Absenteeism Self Report

Teachers sometimes miss school. In this sample, the number of days reported missed varied from none to 42, with a mean of 4.85.

The teachers' own report here confirms the problem of absenteeism reported by the Headteachers. An excessive number of days missed, like 42, could be due to illness.

3.4.10 Time Teachers Take to Travel to School

Teachers reported that they take an average of 24.49 minutes to travel to schools. The teachers largely agree with pupils and headteachers that they do not spend a lot of time traveling to school. As indicated in table 39 below, 63.9% of the teachers reported that traveling time has no impact on their teaching at all while 17.1% reported that traveling time had impact on their teaching to a large extent.

Table 39: The Extent To Which Traveling Time Affects Teaching

	Frequency	Percent
Not at all	101	63.9
To a small extent	30	19.0
To a large extent	27	17.1
Total	158	100.0

3.4.11 Interest of Teachers in Teaching

If there were an opportunity, 58.2% of the teachers would change to another career as shown in the table below.

Table 40: Distribution of Teachers Who Wish or Do not Wish to Change Career

Wish to change career	Frequency	Percent
Yes	92	58.2
No	66	41.8
Total	158	100.0

It is not appropriate to conclude from the high percentage of teachers who would change jobs if they had the opportunity that most teachers are not interested in their work. However, it is important to keep in mind that in case there are some teachers who are genuinely not interested in teaching, they may not put in their best in teaching the pupils.

3.4.12 Use of Teachers' Time

The percentages of teachers' who spend their time on the activities listed below are presented in table 41

Table 41: Activities on Which Teachers Spend Their School and After School Hours

Activity	Percentage of Teachers	
	During School Hours	After School Hours
Administration	28.7	45.7
Lesson preparation	33.6	100
Correcting/marking pupils' exercises	89.0	98.1
Extra curricular activities	50.3	92.9
Remedial teaching	84.2	86.5
Meetings with Headteacher and Other Teachers	75.5	91.5
Further studies for self-development	13.6	54.3
Private tutoring	8.2	35.5

Marking pupils' work constitutes a major occupation of the teachers, both during and after school hours. It is therefore no surprise when the largest group of the respondents indicated that they assess pupils' learning achievement daily as reflected in table 42 below. Lesson preparation, remedial teaching, meetings, etc, are some of the other activities teachers spend their time on.

Apart from marking or correcting pupils' work, teachers have to assess their pupils. The frequency of this assessment is presented below.

Table 42 Frequency With Which Teachers Assess the Learning Achievement of Their Pupils

	Frequency	Percent
Once a year	0	0.0
Once per term	3	1.9
Two to three times per term	25	15.7
Two to three times per month	39	24.5
Once or more per week	30	18.9
Daily	62	39.0

Total	158	100.0

Up to 39.0% of the teachers reported that they assess their pupils daily. None of the teachers indicated that they assess the learning achievement of the pupils once a year. Teachers should therefore know the impact of their time invested on remedial teaching.

3.4.13 The Assessment Methods Used by Teachers

The assessment methods used by the teachers are reported in table 43 below.

Table 43: Percentages of Teachers Using Different Assessment Methods

Assessment Method	Percentages
Teacher made tests and examinations	96.2
External standardized tests and examinations	53.3
Oral examination	77.6
Observation of pupil participation in class	96.7
Classroom work of the pupils	97.4
Home-work/assignments	91.3
Projects/craft work	68.6

The teachers are therefore using a variety of methods to assess their pupils, the main ways being class work of the pupils, classroom observation and teacher made tests.

3.4.14 Factors Contributing to Poor Performance of Pupils

Teachers' were presented with factors that could lead to poor performance of the pupils. The percentages of them that indicated the contribution of each factor to poor performance are presented in table 44 below.

Table 44: Percentages of Teachers Endorsing the Extent to Which Various Factors Contribute to the Poor Performance of Pupils

Factor	To a Large Extent	To Some Extent	Not at All
	%	%	%
Automatic Promotion	53.9	30.5	15.6
Loaded Curriculum	39.9	47.1	13.1
Parental Indifference	49.0	46.5	4.5
Socio-economic status of the pupils	37.1	60.8	2.1
Family problems	56.1	42.0	1.9
Orphaned Children	42.2	48.7	9.1

Lack of Remedial Teaching	36.1	50.0	13.9
Lack of teaching skills	38.1	40.6	21.3
Language of instruction	35.0	54.8	10.2

No factor was endorsed by the teachers as predominantly contributing to the poor performance of the pupils, other than Family problems (56.1%) and Automatic promotion (53.9%). Every factor contributes to the poor performance of pupils to some extent, particularly Socio-economic status of the pupils (60.8%), Language of instruction (54.8%) and Lack of remedial teaching (50.0%). Very few agreed that family problems and socioeconomic status of the pupils had no impact at all. Twenty one point three percent do not blame the poor performance of the pupils on lack of teaching skills.

3.4.15 Discussion of Teacher Questionnaire

The female teachers outnumber the male ones in a ratio of 3.7 to 1. This is consistent with what the Headteachers reported. The concern is whether or not pupils get enough of father / male image in school. The teaching force is young (age ranges 21 to 40 constitute about 70%). The force should therefore be vibrant.

The teachers have post-secondary education in the main. Only 11.6% have primary education as the highest academic qualification. They have on the average at least 12 years of teaching, with two of the years spent in teaching Standard Four. These teacher characteristics augur for good learning. They are mostly mature teachers, with only 0.6% of them under 20 years of age. None of the teachers is too old, with those over 51 years constituting 7.0% of the sample.

A lot of the teachers indicated they use English for instruction. This is consistent with the recommendation of the National Commission on Education (1993).

Classrooms have facilities. Desks, chairs, chalkboards and chalk are available. There are some books, teachers' guides and some reading materials. In general, most of the teaching and learning materials are available in many schools. The teachers are dedicated and do a lot of marking of the pupil's work. Some other aspects of schools reported by teachers may not be conducive to good achievement. For example, they largely reported having no access to duplicating machines, photocopiers, typewriters and computers. Typewriters and duplicating machines are basic tools for teachers. Some also reported insufficient books.

58.2% of the teachers would change to another career if there were a chance. This could be an indication that so many teachers are in the classroom, but they do not really want to be there. Teacher absenteeism is common, with an average of five days missed.

The teachers point to the following factors as contributing to possible low performance of the pupils: automatic promotion, family problems, parental indifference and lack of teaching skills.

Though teachers are regularly observed by their immediate supervisors, observations by inspectors are rather scarce. Inspectors largely come to assess and to guide the teachers.

3.4.16 Policy Implications of Teacher Responses

1. The teachers report an average traveling time of 24.4 minutes. This is consistent with what the pupils and headteachers reported, thereby confirming the success in bringing schools close to the pupils, as well as the teachers.

2. Improving the quality of education involves improving the quality of the teachers. There are still 11.6% of the teachers with primary education only as their highest academic qualification. Some ways should be found for these teachers to upgrade.

3. The case of a lot of Standard Four teachers giving instruction in English is in compliance with the recommendation of the National Commission on Education (1993, p. xxvii) that instruction should be conducted in English from Standard Four, starting from 1995. The White Paper (1994, p18) is not very explicit on this issue, but implementation is obviously progressing well.

4. A number of teachers report insufficient books, teachers' guides and lack of access to facilities like duplicating machines and typewriters. Stock should be taken of what schools were supplied and what they now have. Where deficiencies are due to inadequate supply or fair wear and tear, they should be made good.

5. It may not be possible for every teacher to have access to a duplicating or typing machine. But these are tools a teacher needs to be available to prepare materials for pupils. Every school should have such facilities, each with an operator to serve the teachers. With the rapid advance of technology, it would be even better if computers can be supplied to every school, not only to help the teacher with work, but for the pupils also to learn how to use them.

6. Teachers report they are inspected by their immediate supervisors as well as inspectors. Yet absenteeism is high. The very young children cannot learn without a teacher in the classroom. Support systems need to be put in place to address teacher absenteeism.

7. There is shortage of classrooms in some cases and as a result pupils of not only the same standard but also of different standards share classrooms. More classrooms need to be constructed.

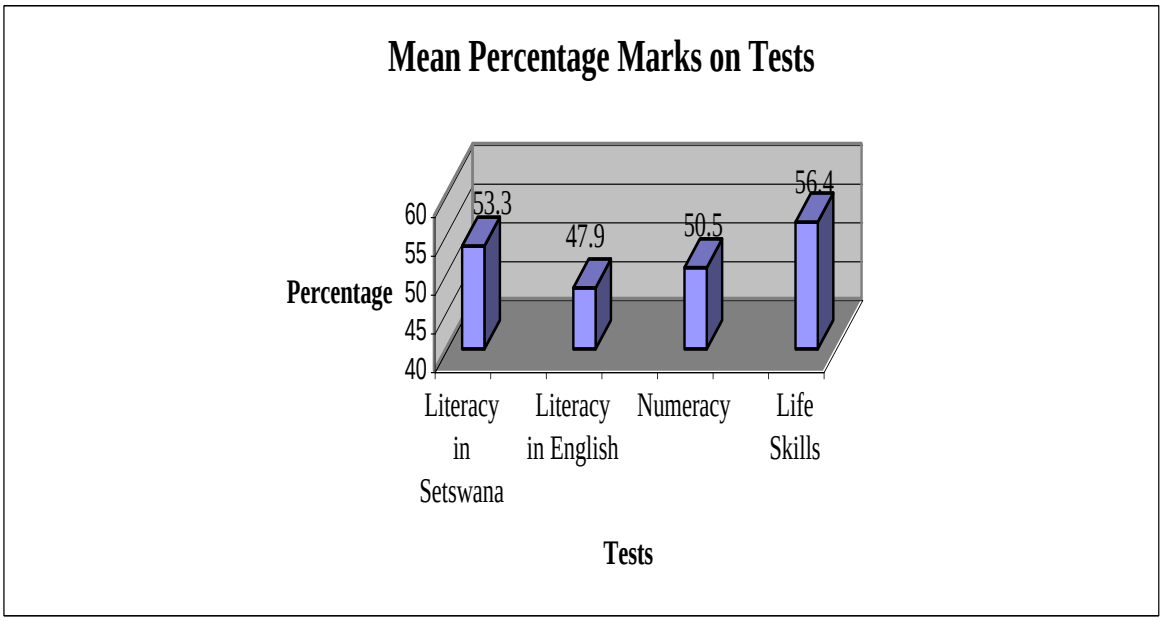
8. There is shortage of storage facilities. There is also low access to the teaching aids such as photocopiers, computers, typewriters etc. in some schools. Most schools are not electrified. These are facilities needed for improvement of the quality of teaching and learning and should therefore be attended to.

4 PERFORMANCE OF THE PUPILS IN THE TESTS

This chapter reports the performance of the pupils on the four tests.

4.1 Test Total Scores Summary Statistics

The structures of the four tests administered to the pupils were presented at the end of chapter two. Mean percentage scores obtained by the pupils on the four tests are presented in the chart below.



The mean score on each test is over 50%, except for Literature in English, which stood at 47.9%. The highest percentage score was obtained in Life Skills (56.4).

The table below presents the mean scores and the minimum and maximum scores obtained on the tests.

Table 45: Mean Percentage Scores Obtained by the Pupils on the Four Tests

Statistics	Literacy in Setswana	Literacy in English	Numeracy	Life Skills
Mean	53.33%	47.9%	50.54%	56.4%
n	5416	5525	5535	5563
Minimum	2.0%	3.3%	6.7%	6.7%
Maximum	95.83	100%	92.86	93.33%

The maximum score of 100% was obtained on Literacy in English test and on the other three tests, the maximum score obtained in each exceeded 90%. This gives further assurance that the competencies tested were within reach of the pupils who had mastered them. Raw scores as low as one were obtained in both Literacy tests and as low as two in Numeracy and Life Skills tests.

The frequency distributions of the total scores on the tests are at appendices IV to VII.

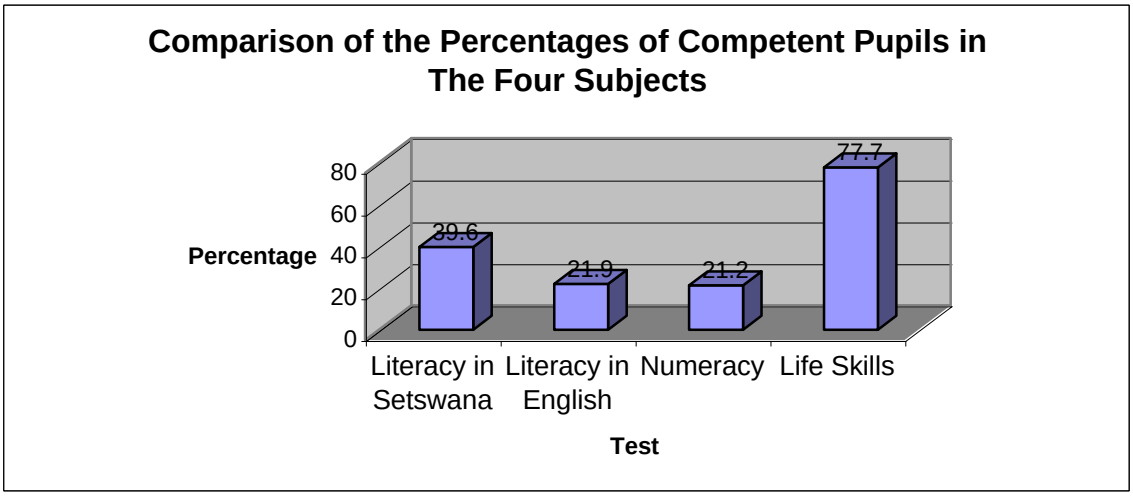
4.2 Percentage Of Pupils Who Reached Competency Level On Each Complete Test

The percentages of pupils reaching the established competency levels are given in the table below.

Table 46: Percentage of Competent Pupils on Each Complete Test

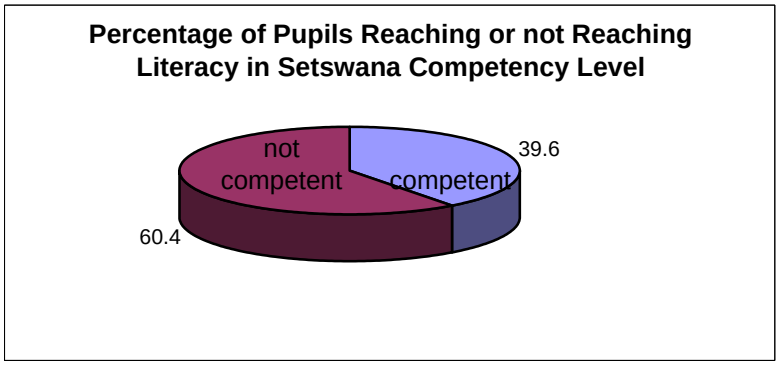
Literacy in Setswana	Literacy in English	Numeracy	Life Skills
39.6	21.9	21.2	77.7

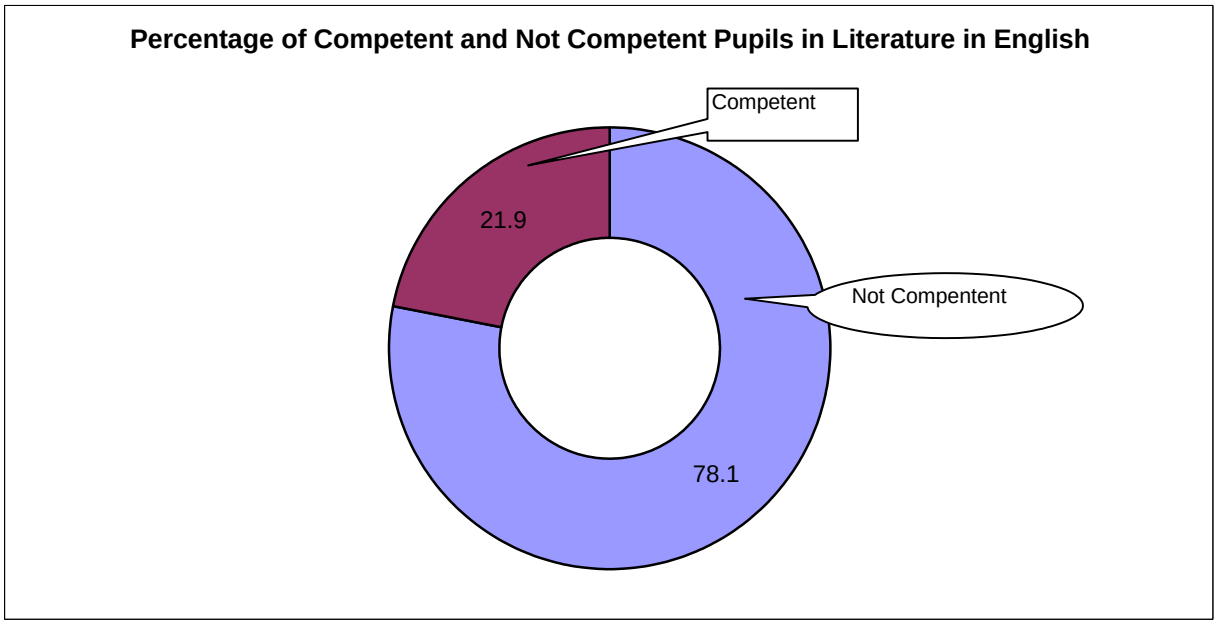
The percentages of competent pupils on the subjects are presented pictorially below.

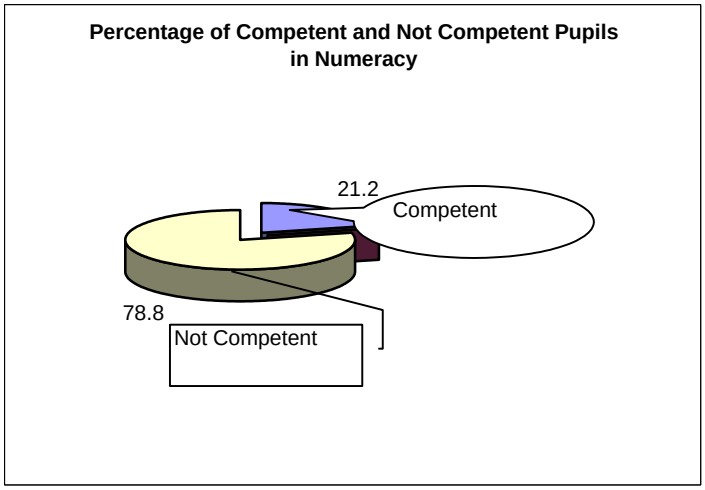


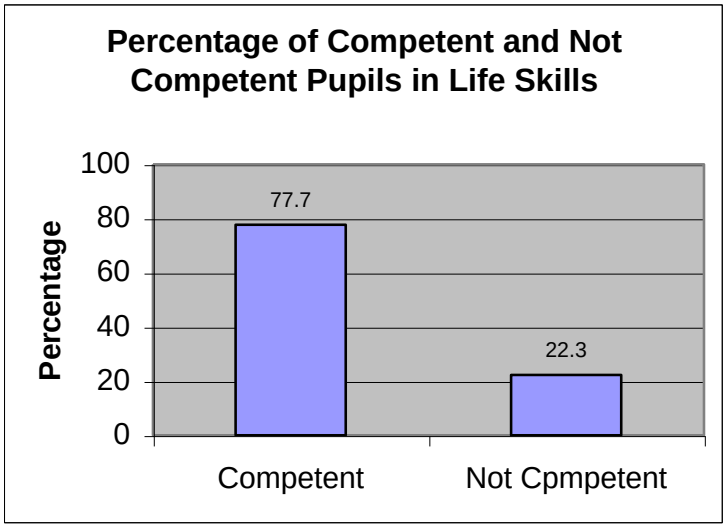
The highest percentage of competent pupils was attained on Life Skills (77.7%). Less than 40% of the pupils were found to be competent on the other three subjects. Numeracy had the least percentage, followed by Literacy in English.

The percentages of competent and not competent pupils in each subject are presented graphically below.


Percentage of Pupils Reaching or not Reaching Literacy in Setswana Competency Level
not competent
competent
39.6
60.4


Percentage of Competent and Not Competent Pupils in Literature in English
Competent
21.9
Not Compentent
78.1


Percentage of Competent and Not Competent Pupils in Numeracy
21.2
Competent
78.8
Not Competent



4.3 Literacy in Setswana Test Results

4.3.1 Literacy in Setswana Domain Summary Statistics

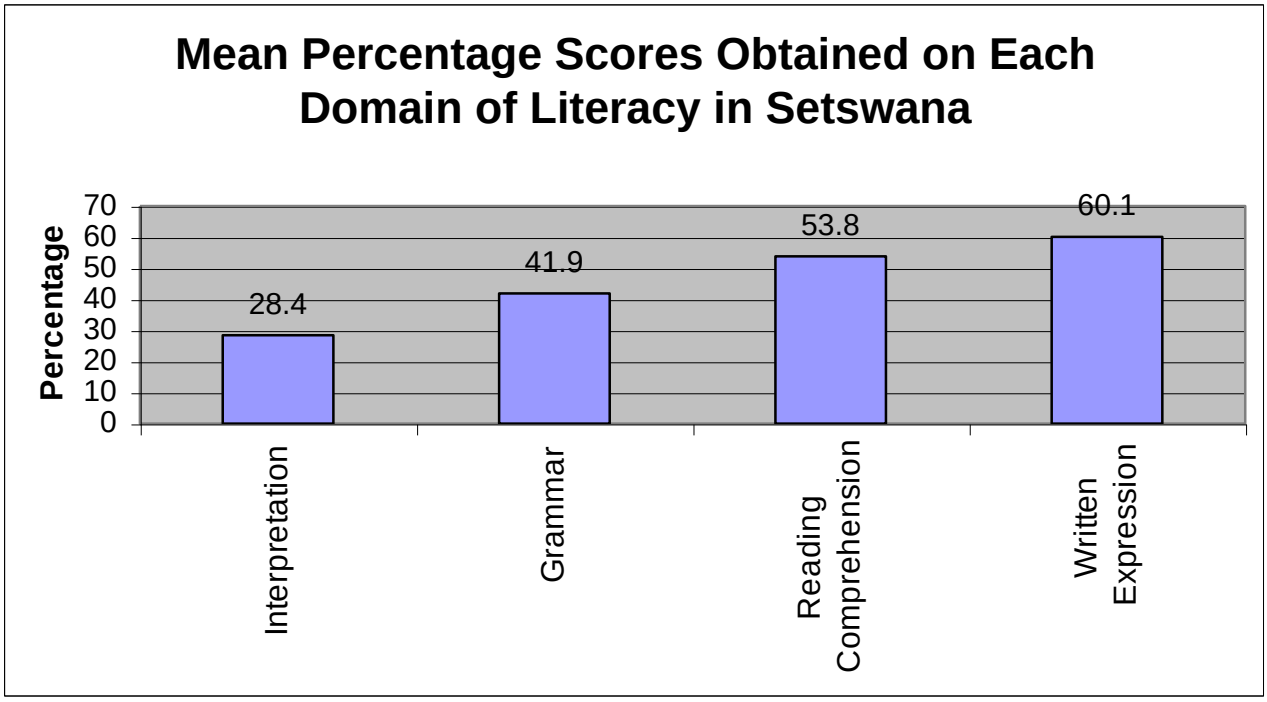
Summary statistics on the Literacy in Setswana total and domain scores are presented in table 47 below.

Table 47: Summary Statistics on the Setswana Total and Domain Test Scores

Statistics	Total Scores	Interpretation	Grammar	Reading Comprehension	Written Expression
Mean	53.33%	28.4%	41.9%	53.8%	60.1%
n	5416	5320	5425	5417	5449
Minimum	2.0	0	0	0	0
Maximum	95.83	100%	77.8%	100%	100%
Total Scores	48	5	18	17	8

The maximum percentage score of 100 was obtained on the domains of Interpretation and Written Expression. Grammar had the lowest maximum percentage score (82.35).
The minimum score of zero was obtained on each domain and a score of 2% was obtained on the complete test.

The mean percentage scores on the domains are presented graphically below.



The highest mean score was obtained on the domain of Written Expression and the lowest on Interpretation.

4.3.2 Competency in Literacy in Setswana Domains

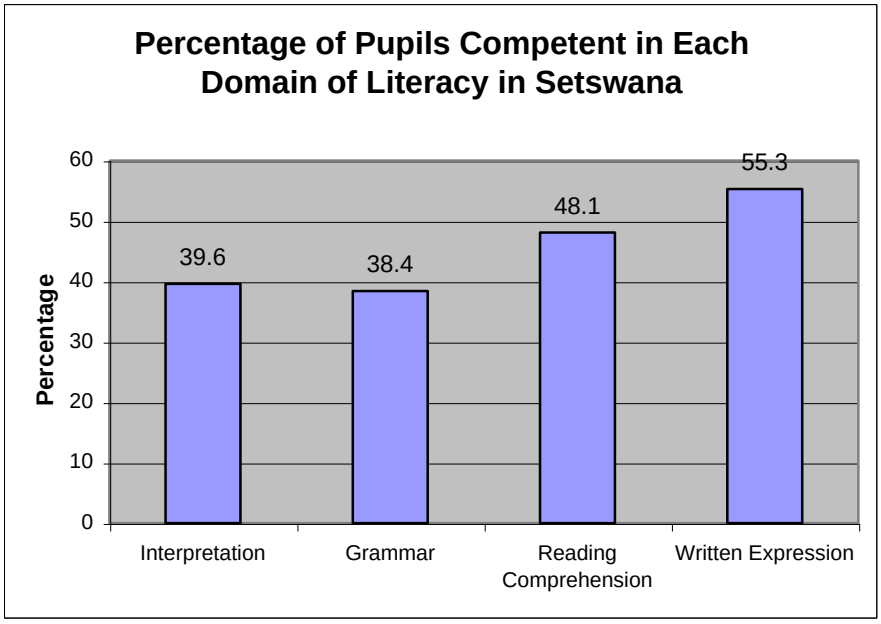
Table 48presents the percentage of the pupils who reached the cutoff scores for the whole test and for each domain of Literacy in Setswana.

Table 48: Percentage of Competent Pupils on Literacy in Setswana Domains

	Complete Test (n=5416)	**Interpretation (n=5320)**	**Grammar(n =5403)**	**Reading Comprehension (n=5417)**	**Written Expression (n=5449)**
Percentage Competent	39.6	39.6	38.4	48.1	55.3

Thirty nine point six percent of the pupils sampled reached the competency level established by the teachers for Literacy in Setswana. The majority of the pupils did not reach the competency level for the complete test. Reference can be made to Appendix IV for the distribution of the complete test scores.

The percentages of pupils who reached competency levels on the domains are presented pictorially below.



Written Expression had the highest percentage of the pupils declared competent (55.3) while Grammar was the domain with the least percentage (38.4) of competent pupils, followed by Interpretation (39.6%). Reading Comprehension had 48.1% of the pupils declared competent.

Interpretation

Like in the complete test, only 39.6% reached the competency level. This domain was not well mastered by pupils who obtained a mean score of only 28.4% of the available marks. Up to 26.3% of the pupils got zero. Thirty four point one percent got a score of one while only 2.5% managed to obtain the maximum score of 5 on the domain.

Grammar

The percentage of pupils who reached competency level in this domain was 38.4. This was the lowest percentage of competent pupils in all the domains of Literacy in Setswana. Yet grammar is a basic mechanic of any language and should be mastered early. The level of performance was low, with a mean of 41.9%. Only 16 pupils got the perfect score of 18 on the domain.

Reading Comprehension

Forty eight point one percent of the pupils were found competent in this domain. The domain was assessed by means of 17 items. The majority of pupils are barely able to read Setswana with comprehension. It is only 10.2% of them who obtained the highest possible score (17). Seven of the pupils scored zero while 26 scored one out of 17.

Written Expression

Written Expression had the highest percentage of the pupils declared competent (55.3). It is worth noting that of all the domains assessed, pupils did best in Written Expression which is usually a difficult skill to acquire. However, the pupils demonstrated that they could write.

Seventeen point three percent of the pupils obtained the maximum score of eight on the domain. However, five percent of them got zero.

4.4 Literacy in English Test Results

The detailed results of the performance of the pupils on Literature in English are presented below.

4.4.1 Literacy in English Domain Summary Statistics

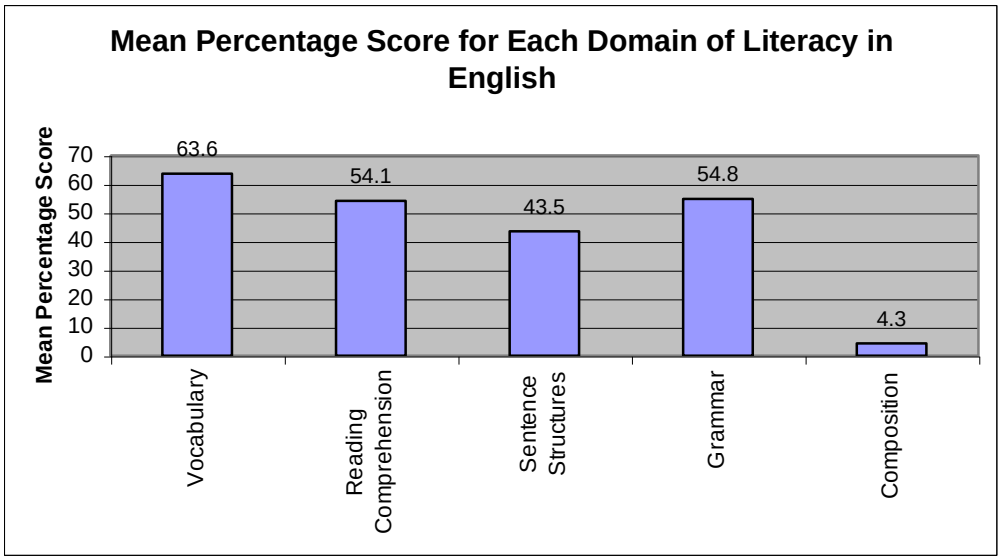
Summary statistics on the Literacy in English total and domain scores are presented in table 49 below.

Table 49: Summary Statistics on the Literacy in English Total and Domain Test Scores

Statistics	Total Scores	Vocabulary	Reading Comprehension	Sentence Structures	Grammar	Composition
Mean	47.9%	63.6%	54.08%	43.5%	54.75%	4.33%
n	5525	5446	5276	5551	4407	5553
Minimum	3.3	0	0	0	0	0
Maximum	100%	100%	100%	100%	100%	100%
Total Scores	30	5	12	6	4	3

The minimum score of zero was obtained on each domain, and the lowest score obtained on the complete test was 3.3%. The maximum marks (100%) for the complete test and for each domain were realized.

The mean percentage mark on the overall test is 47.9%. The mean percentage mark for each domain is presented pictorially below.



The highest mean percentage (63.6) of the scores was made in Vocabulary while the lowest mean percentage score was made in Composition (4.3%). The mean mark on Grammar and Reading Comprehension were 54.08 and 54.75%, respectively.

4.4.2 Competency Rates in Literacy in English Domains

Information on the percentage of pupils reaching competency levels established by teachers on the whole test and on each domain is given below.

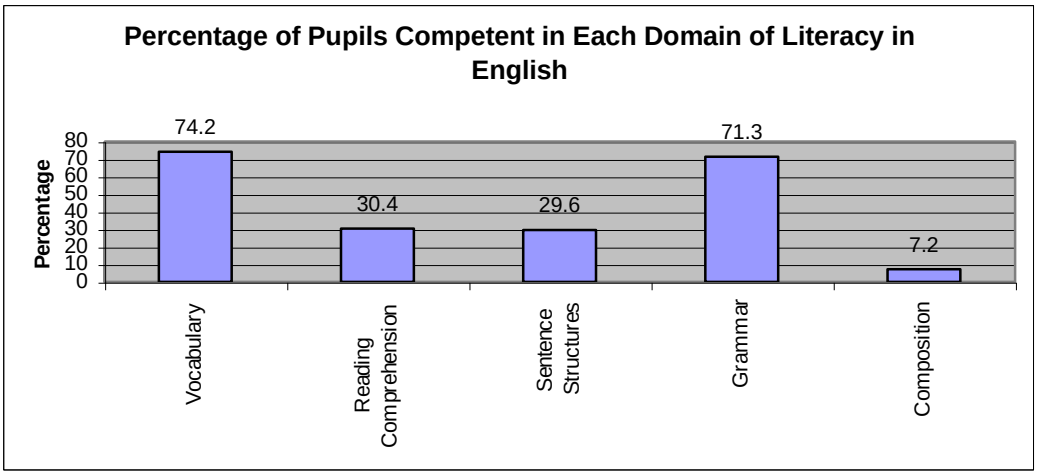
Table 50: Percentage of Competent Pupils on Literacy in English

	Total Scores (n=5526)	Vocabulary (n=5446)	Reading Comprehension (n=5276)	Sentence Structures (n=5551)	Grammar (n=4407)	Composition (n=5553)
Percentage Competent	21.9	74.2	30.4	29.6	71.3	7.2

Twenty one point nine percent of the pupils reached the competency level on the whole test. The majority of the pupils therefore did not reach the desired competency level. Possibly the poorer attainment of competency level in Literacy in English compared to Literacy in Setswana is due to the fact that Setswana is a subject as well as the most widely spoken language in homes of the pupils.

Appendix V presents the frequency distribution of the total scores for Literacy in English. The percentages of pupils attaining various marks can be read from the Appendix. Four of the pupils obtained the maximum possible mark of 30, while two scored one on the test. A score of 15 (50%) or higher was obtained by 46.5% of the pupils.

The percentages of pupils who reached competency levels on the domains are presented pictorially below.



Vocabulary had the highest percentage of competent pupils (74.2%), followed by Grammar (71.3%). Composition had only 7.2% of the pupils declared competent. Details on individual domains follow.

Vocabulary

Seventy four point two percent of the pupils were declared competent on Vocabulary.

Out of a total score of 5 on the domain, 12.2% obtained the perfect score. It is noted that 31.0% of the pupils obtained each of the scores 3 and 4. The total percentage of pupils who scored 3, 4 and 5 represent the majority of pupils. 1.8% of them obtained a score of zero . Pupils are therefore obtaining good scores on this domain, indicating that it is well mastered.

Reading Comprehension

The percentage of competent pupils on this domain was found to be 30.4. This means 69.6% had not attained mastery on the domain. Performance was therefore weak.

A score of zero was obtained by 5 pupils while 29 pupils got the maximum mark of 12 on the domain. 69.3% of the pupils scored at least 50% of the total marks.

Sentence Structures

The percentage of pupils who reached the competency level on this domain was 29.6. This is low attainment.

The percentages of pupils who obtained the top two scores of 5 and 6 are 8.1% and 2.7% respectively. This is very low compared to those who scored zero and one. Over 70% could only score a mark of three or less out of six marks on the domain.

Grammar

Pupils performed well on this domain, with 71.3% of them attaining competency. 28.7% scored one or less while 39.4 scored 3 or 4 out of a maximum of 4. A score of two alone was obtained by 31.9%of the pupils. Pupils are therefore performing well on this domain.

Composition

This was the domain worst done by the pupils. Only 7.2% of the pupils attained competency level.

There were only three marks available for this domain. Up to 92.8 % of the pupils scored zero. Thus, with a cutoff of one, only 7.2% of the pupils reached competency

level. This is indicating that achievement on this domain is very low. This is in contrast to Literacy in Setswana where achievement was highest for Written Expression.

4.5 Numeracy Test Results

Details of the Numeracy test results are presented below.

4.5.1 Numeracy Test Summary Statistics

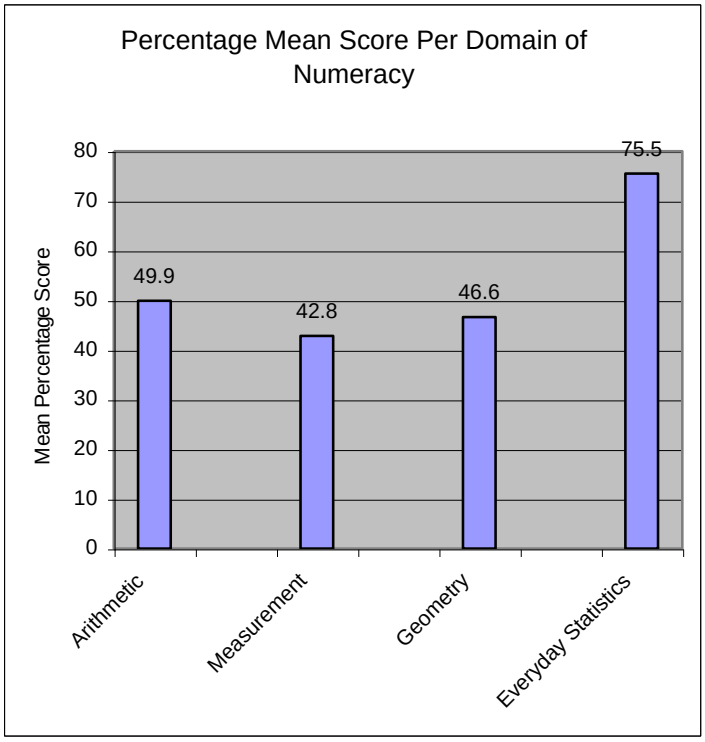
Summary statistics on the Numeracy complete and domain scores are presented in table 51below.

Table 51: Summary Statistics of the Numeracy Complete and Domain Test Scores

Statistics	Total Scores	Arithmetic	Measurement	Geometry	Everyday Statistics
Mean	50.54%	49.4%	42.75%	46.6%	75.5%
n	5535	4798	5369	4950	5348
Minimum	7.1%	0	0	0	0
Maximum	92.86%	93.3%	100%	100%	100%
Total Scores	28	15	4	5	4

The maximum possible scores were obtained in Measurement, Geometry and Everyday Statistics. The highest score on the complete test and on Arithmetic were 92.9% and 93.3%, respectively. The minimum score of zero was obtained in each of the four domains.

The mean score on the complete test was 50.5% of the available marks.
The percentage mean score for each domain is presented in the chart below.



The mean score on Everyday Statistics is 75.5% of the domain score. This was the only domain on which the pupils scored at least 50% of the available marks. The percentage mark obtained was least in Measurement.

4.5.2 Competency Levels in Numeracy

Table 52 presents the percentages of the pupils who reached the cutoff scores for the whole test and for each domain of Numeracy.

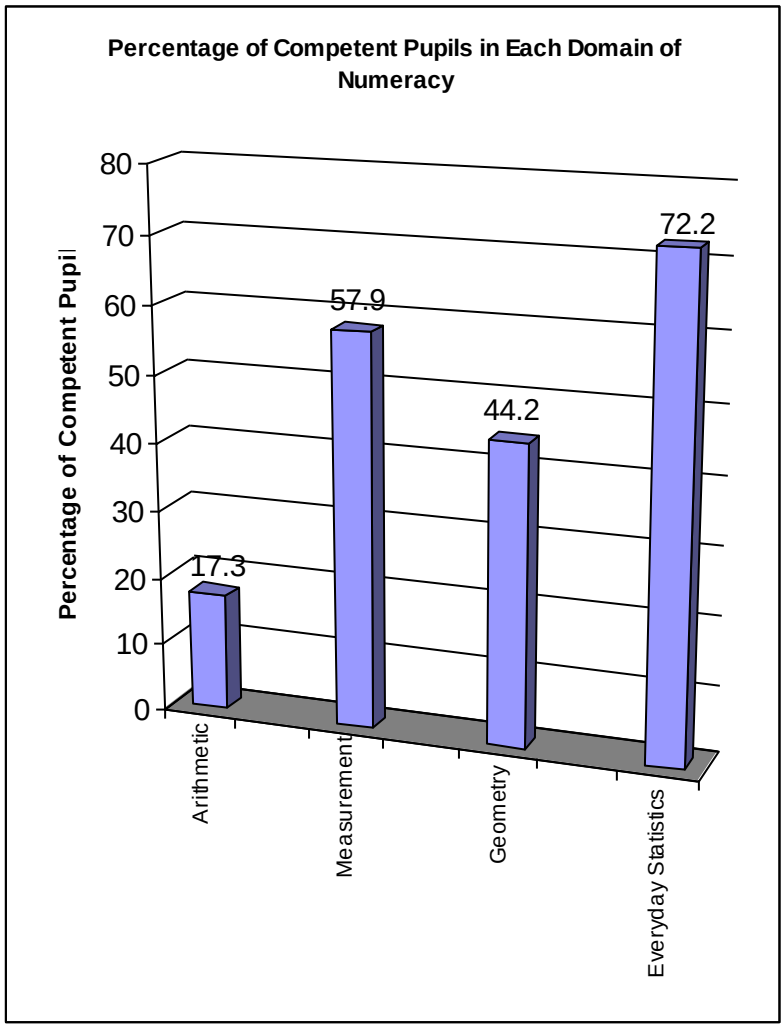
Table 52: Competency Levels and % of Competent Pupils on the Numeracy Test

	Total Scores (n=5535	**Arithmetic (n=4798)**	**Measurement (n=5369)**	**Geometry (n=4950)**	**Everyday Statistics (n=5348)**
Percentage Competent	21.2	17.3	57.9	44.2	72.2

Twenty one point two percent of the pupils reached competency level on the complete test. Like in Literacy in English, the outcome reflects lack of quality learning in Numeracy. The majority of the pupils did not show mastery of Numeracy. The distribution of scores on the complete test is presented at Appendix VI. The highest score

observed was 26 and the minimum was two. Most of the scores are at the lower end of the distribution.

The chart below presents the percentages of pupils who demonstrated competency in each domain of Numeracy.



The pupils performed best in Everyday Statistics, with 72.2% of them attaining mastery. This was followed by Measurement where 57.9% attained mastery. In Geometry, 44.2% attained mastery. Performance was particularly weak in Arithmetic where only 17.3% of the pupils exhibited mastery.

Arithmetic

The percentage of pupils who reached competency level in Arithmetic was 17.3. This is quite low.

Nobody scored the highest mark of 15 available on this domain. Three pupils scored zero on the domain. Less than 50% of the pupils scored 50% of the marks in this domain. 82.7% scored less than 10 out of 15. Hence, from the cutoff established, performance in this domain was inevitably weak. This result was unexpected since a basic competency pupils are expected to acquire in Numeracy is to be able to handle arithmetical operations.

Measurement

Over a half (57.9%) of the pupils in the sample were found to be competent in Measurement. Achievement on the domain was therefore moderate.

There were four scores available on this domain. The top score of four was attained by 3.3% of the pupils. Up to 13.6% of the pupils obtained zero on this domain. A further 28.5% obtained a score of one on the domain. The score with the highest proportion of pupils was two.

Geometry

The percentage of pupils who attained mastery on the domain was 44.2. Thus 55.8% of the pupils did not attain mastery. The net result was therefore a moderate performance.

Up to 6.1% of the pupils obtained a score of zero out of five on the domain. 55.8% of them scored two or less. There were very few (3.9%) top scores on this domain.

Everyday Statistics

The pupils performed best in Everyday Statistics, with 72.2% of them attaining mastery.

The mean score on Everyday Statistics is 75.5% of the domain score. This was the only domain on which the pupils scored at least 50%, on the average, of the available marks. The highest possible mark on each domain was observed, except for Arithmetic where the highest score obtained was 14 out of 15.

The percentage obtaining the top score of four in this domain was 42.6%. This was followed by a percentage of 29.6% that obtained a score of three in the domain. Scores of zero and one were obtained by 10.4% of the pupils. The high scores by many pupils resulted in a high percentage of the pupils achieving mastery in the domain. Pupils performed well on Everyday Statistics.

4.6 Life Skills Test Results

Details of the performance of the pupils on Life Skills are given below.

4.6.1 Life Skills Summary Statistics

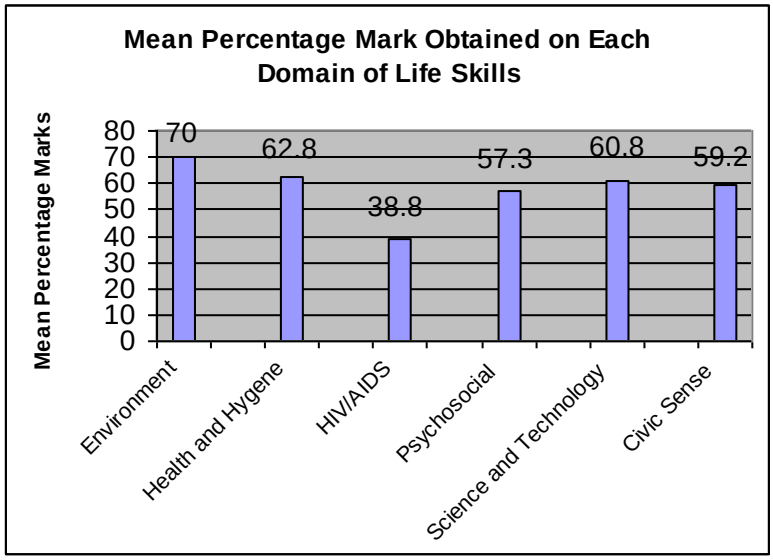
Summary statistics on the Life Skills total and domain scores are presented in table 53 below.

Table 53: Summary Statistics on the Life Skills Total and Domain Test Scores

Statistics	Total Scores	Environment	Health and Hygiene	HIV/ AIDS	Psycho-Social	Science and Technology	Civic Sense
Mean	56.43%	70.00%	62.83%	38.75%	57.3%	60.75%	59.17%
n	5563	4769	5511	5530	4751	4743	5147
Minimum	6.7%	0	0	0	0	0	0
Maximum	93.33%	100%	100%	100%	100%	100%	100%
Total Scores	30	3	6	4	10	4	3

The maximum marks possible on each domain was obtained, while a score of 93.3% was obtained on the complete test. The lowest mark of zero was obtained on each domain.

The chart below presents a graphical view of the domain percentage mean scores.



The pupils obtained mean marks of at least 50% of the complete test and of each domain scores, except for HIV/AIDS where they got a mean of 38.75%.

The highest percentage mean score was obtained on Environment, followed by Health and Hygiene, and Science and Technology, in that order.

4.6.2 Competency Levels in Life Skills Domains

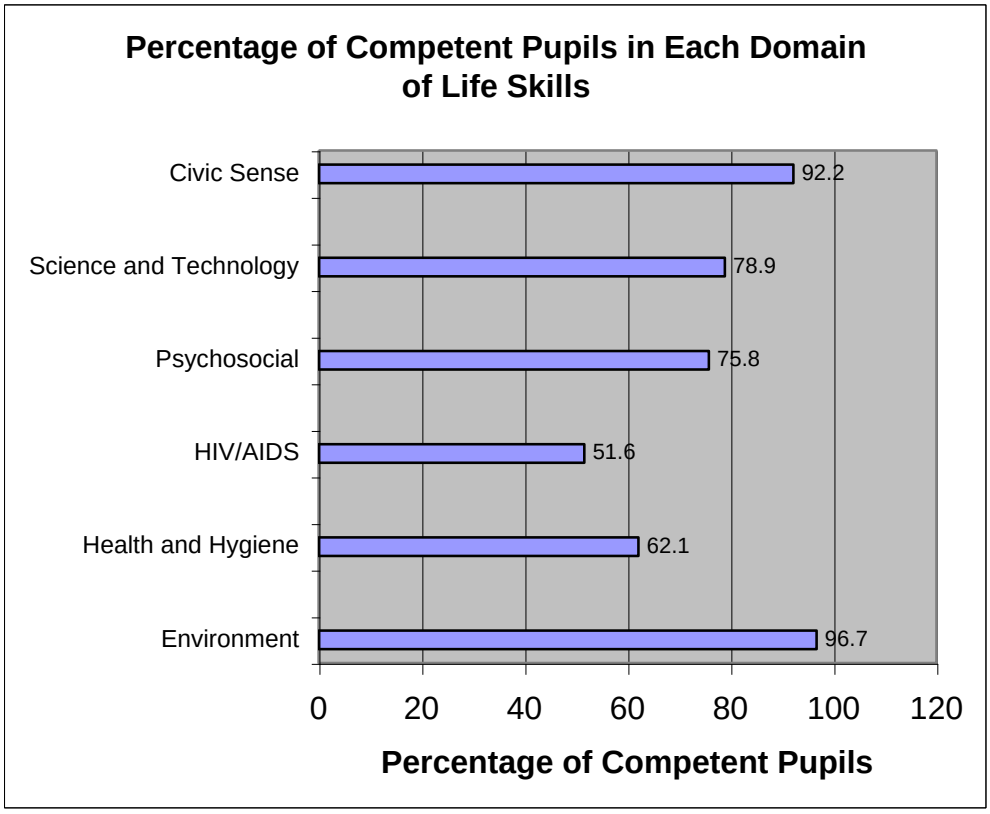
Table 54 presents the percentage of the pupils who reached the cutoff scores for the complete test and for each domain of the Life Skills test.

Table 54: Competency Levels and % of Competent Pupils on Life Skills Test

	Complete Test (n=5563)	**Environment (n=4769)**	**Health and Hygiene (n=5511)**	**HIV/AIDS (n=5530)**	**Psycho-social (n=4751)**	**Science and Technology (n=4743)**	**Civic Sense (n =)**
Percentage Competent	77.7	96.7	62.1	51.6	75.8	78.9	92.2

Seventy seven point seven percent of the pupils reached the established competency level on the complete test. Appendix VII gives the frequency distribution of the total marks on the Life Skills test. The scores are not widely spread out. The lower end of the distribution has very few people.

The percentages of pupils who reached competency levels on the domains of Life Skills are presented graphically below.



Over 50% of the pupils were competent on every domain. Environmental Awareness and Civic Sense had over 90% of the pupils exhibiting mastery. The lowest percentage of mastery was obtained on HIV/AIDS (51.6%).

Environment

The highest percentage of competent pupils (96.7) was attained on this domain. This indicates that environmental awareness is quite strong in the pupils.

The domain was assessed by means of three items. Scores of two and three were obtained by 78.2% of the pupils. Three point three percent, however, got zero on the domain.

Health and Hygiene

The percentage of pupils who were found competent on this domain was 62.1. This is a moderate attainment.

The maximum score of six was attained by 6.7% of the pupils. One percent got zero while 37.9% got three or less.

HIV/AIDS

The percentage of pupils who reached competency level on this domain was 51.6. This leaves out 48.4% who did not reach competency level. The implication is that there are too many pupils who have not attained the basic competency on this very important domain.

Up to 10.2% got zero out of four while 48.4% got less than a score of two(50%) on the domain. The top score of four was attained by 2.1% of the pupils. The most frequent scores were one and two. Overall, achievement on this domain was the lowest in Life Skills.

Psychosocial Skills

Seventy five point eight percent of the pupils were found competent on this domain. Attainment was therefore fairly good, though 24.2% did not attain mastery.

No pupil got a zero out of 10 marks on this domain. A score of five (50%) or more was attained by 75.8% of the pupils. The maximum score of 10 was attained by one percent of the pupils. Hence pupils made good scores on this domain.

Science and Technology

The percentage of pupils who were found competent on this domain was 78.9. The top two scores of three and four were obtained by 51.6% of the pupils. A score of zero was obtained by 5.3% of the pupils. Like in HIV/AIDS, a score of two (50%) or less was obtained by 48.4% of the pupils. The achievement of the pupils was therefore good.

Civic Sense

Performance on this domain was good, with 92.2% of the pupils reaching the competency level. The total percentage of pupils obtaining a score of zero and one is 36.5%. Those who scored 2 and 3 are 63.6%. This therefore means that the majority of pupils performed quite well on Civic Sense.

4.7 Discussion of Test Score Results

Pupils did not do well on the tests. On the total test, only Life Skills had 77.7% of the pupils reaching competency level. Setswana was a distant second with 39.6% of the pupils competent. Literacy in English and Numeracy fared worst, with 21.9% and 21.2% of the pupils, respectively, being declared competent. This is not a result that would be expected where there are qualified teachers who spend a lot of their time on lesson preparation, assessment of the pupils and giving the pupils remediation as needed.

Further, scholastic provisions in the schools are not drastically inadequate. It is to be noted that Life Skills on which the pupils performed the best is not yet a subject that is widely taught in schools.

At domain level, Life Skills outcome was still the best. Environmental Awareness had 96.7% of the pupils competent followed by Civic Sense at 92.2%. The area of concern in Life Skills is the domain of HIV/AIDS. Only 51.6% of the pupils were competent. HIV/AIDS domain was separated from Health and Hygiene because of the special importance attached to it. It is an important area where one would like all pupils acquiring knowledge in as well as developing appropriate behaviour pattern conducive to healthy and productive living.

The Standard Four children are young. But the future of the nation is in their hands. It is important they understand, at their level, issues regarding HIV/AIDS and cultivate appropriate behaviours at the early age. The 48.4% who are not competent in the domain cannot be taken as lightly as one would take 82.7% of them not competent in Arithmetic.

Performance in Numeracy was a bit of a surprise. Only 21.2% were competent. The domain of Arithmetic where one would expect the pupils to become competent first in the process of learning Numeracy, had only 17.3% of the pupils competent. It was in Everyday Statistics that 72.2% of the pupils were found competent.

The poor performance on Numeracy also applied to Literacy in English. On the total test, 21.9% were competent. The pupils were weakest in Composition, with only 7.2% of them being competent. It was in Vocabulary and Grammar that up to 70% of the pupils were competent. It is understood that pupils have only learnt Literacy in English as a subject and English speaking at home is not practised. A majority of the pupils speak a local language at home. Therefore at Standard Four level and below, there is very little incentive for learning English. This may account in part for the poor performance in this subject, but the same explanation cannot apply to performance in Literacy in Setswana.

Literacy in Setswana was better done than Literacy in English with 39.6% of the pupils attaining competence. The best performance in Setswana was in Written Expression where over 60% of the pupils were found competent. The worst performed domain of Literacy in Setswana was Grammar, with 38.4% of the pupils competent. Setswana, being a medium of instruction, a subject and a language most widely spoken in the homes, should be performed very well.

4.8 Policy Implications on Test Results

1. The low level of competency in Numeracy, Literacy in English, and in Setswana , implies that the concern expressed in 1977 over low academic

achievement still persists today. Government has done a lot to improve the quantity, and the quality, of education. Results of quantitative improvements can be enumerated and include establishment of schools near pupils, increase in enrolment, equality of the sexes in enrolment, etc. Qualitative improvement would best be measured in terms of academic achievement. There are of course other measures of quality, but for the purpose at hand the worry over quality persists. This issue needs close attention.

What is it that can be addressed so that improvement in quality can come about? The following are some of the possible reasons the RNPE (1994) pointed out for the low level of achievement: inadequate physical facilities; teacher quality; ineffective supervision; inadequate co-ordination of the functions handled by the Ministry of Local Government, Lands and Housing, and the Ministry of Education; inefficient distribution of instructional materials; and maintenance of policies like double shifts, and automatic promotion. These factors may not all be operating in the same way today. Most schools have buildings with adequate ventilation; there are classrooms with chalkboards and chalk; some scholastic provisions are admitted available by the teachers; school feeding programmes exist; and teachers report they spend a lot of time preparing their lessons, assessing the work of their pupils and giving remedial lessons. What is hindering the pupils from exhibiting the kind of attainment observed in Life Skills in other subjects? Why is it that some pupils score 100% on the tests while others cannot make even a score of one on a predominantly multiple-choice test? We need to look at the factors along which pupils differ in order to have an appreciation of what could be facilitating or hindering the learning of the pupils.

2. Teacher absenteeism and teacher interest were reported on. A good teacher is one who is full of desire to maximize the learning of the children. Whatever distracts the attention of the teachers and makes them wish to leave the classroom should be attended to, both professionally and administratively. Counseling programmes may be of help to be included in the measures to be taken.

3. Teachers with low academic qualifications should be assisted to upgrade.

4. The instructional practices of the teachers should be studied so as to guide them where there are shortcomings.

5. SOURCES OF TEST SCORE VARIANCE

5.1 Analysis of the Sources of Variation

The tests and questionnaires data contained information that could be used to explore the sources of variation that can be detected in the test scores. The sources of variation captured in the data included gender, geographical location, parental status, teaching and learning aids, teaching and learning strategies, dwelling locations, home amenities, engagement of the child and interest in schooling. Total test scores and not the domain scores were used in the analysis. The information obtained is presented in the sections that follow.

5.2 Variation on the Basis of Sex

The mean scores by sex are presented in table 55 below.

Table 55: Means and Standard Deviations of the Total Scores for Each Sex on Each Test

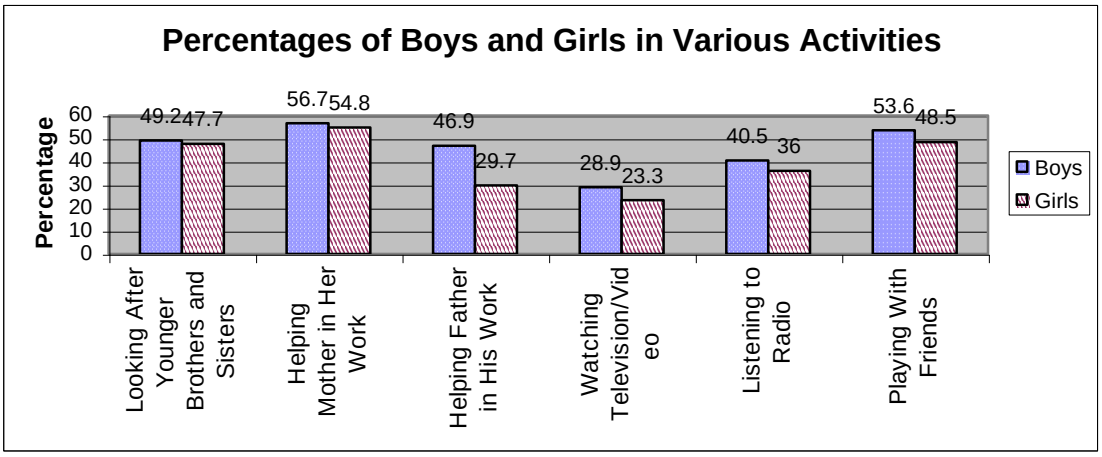
TEST	SEX	n	Mean	Standard Deviation
Life Skills	MALE	2803	16.41	4.64
	FEMALE	2742	17.55	4.13
Numeracy	MALE	2754	13.71	4.16
	FEMALE	2725	14.63	3.82
Literacy in English	MALE	2753	13.65	4.26
	FEMALE	2712	15.12	4.37
Literacy in Setswana	MALE	2637	23.86	8.53
	FEMALE	2613	27.46	8.04

The mean score for the females is higher than that of the males in every test. Female pupils performed significantly better than their male counterparts in all four tests. Female scores are less variable than those of their male counterparts on each test, except for Literacy in English.

Why are girls outperforming boys at Standard Four? Can this finding be used to help boys, and to sustain girls' educational achievement and extend beyond Standard Four?

When segregating information on “not being able to do homework” it was observed that boys have more domestic responsibilities than girls at home do. 49.2% of the boys said they looked after their younger brothers and sisters compared to 47.7% of the girls who said so. 56.7% of the boys said they help their mothers compared to 54.8% of the girls who said so.

46.6% of the boys said they help fathers compared to 29.9% of the girls who said so. More boys listen to the radio and watch television than girls. 53.6% of the boys said they play with friends compared to 48.5% of the girls who said so. This information is captured below.



It is clear from the data that at this level a greater percentage of girls than boys do not get involved in domestic chores and therefore probably have more time to study at home than boys. With fewer of them playing with friends, it is possible they take their homework more seriously. This study has no data on how the two sexes differ in their work habits in school.

5.3 Differences Due to Level of Parental Education

5.3.1 Fathers' Educational Levels

The parents who responded ranged from those who did not receive any formal education at all to those who completed post secondary education. The mean scores of the pupils according to the different levels of fathers' education are presented in table 56 below.

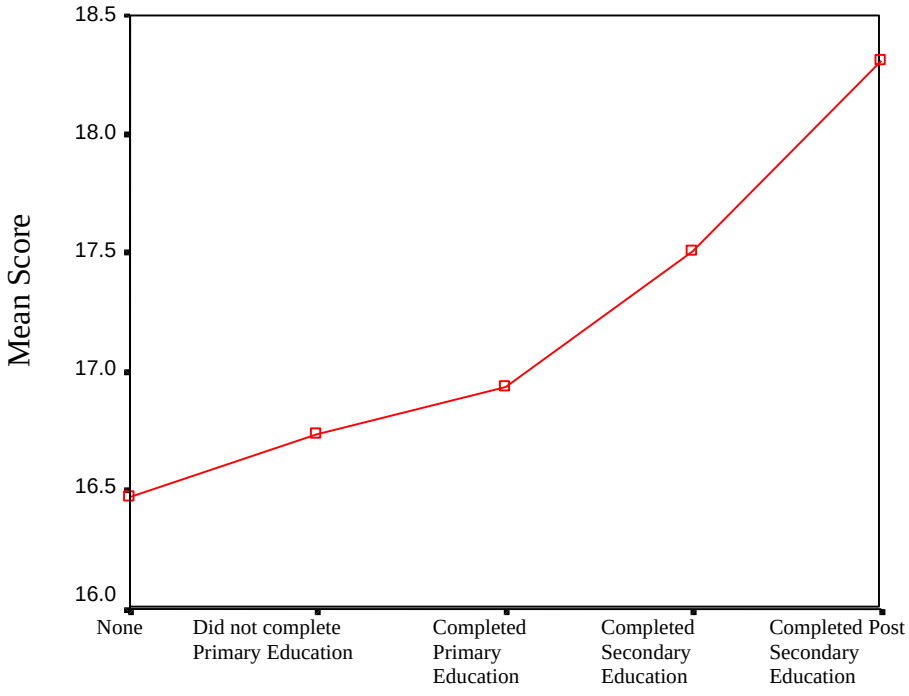
Table 56: Mean Scores of Pupils With Fathers at Different Levels of Education

Test	Education	n	Mean	Std. Deviation	Minimum	Maximum
Life Skills	None	1380	16.47	4.45	2	28
	Did not complete Primary Education	811	16.74	4.33	4	27
	Completed Primary Education	1154	16.93	4.40	3	27

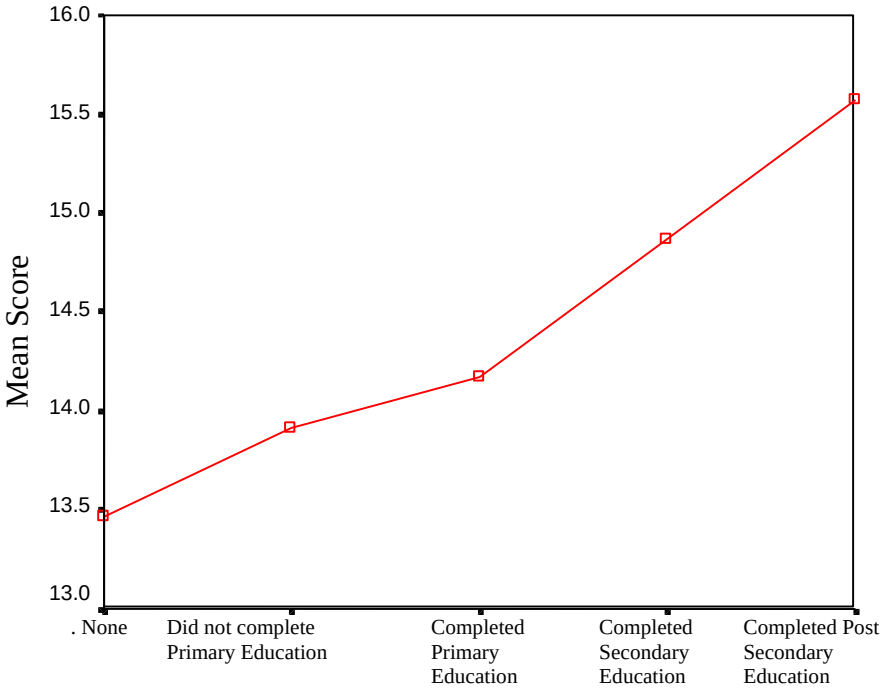
	Completed Secondary Education	775	17.51	4.33	2	28
	Completed Post Secondary Education	548	18.31	4.46	5	28
	Total	4668	17.02	4.43	2	28
Numeracy	None	1386	13.46	4.03	2	25
	Did not complete Primary Education	811	13.91	3.96	3	24
	Completed Primary Education	1142	14.17	4.07	2	26
	Completed Secondary Education	783	14.87	3.77	3	25
	Completed Post Secondary Education	548	15.57	3.97	3	24
	Total	4670	14.20	4.03	2	26
Literacy in English	None	1372	13.31	3.96	2	28
	Did not complete Primary Education	808	13.78	4.05	1	26
	Completed Primary Education	1141	14.26	3.98	3	27
	Completed Secondary Education	775	15.37	4.42	2	29
	Completed Post Secondary Education	550	16.86	5.24	1	30
	Total	4646	14.39	4.38	1	30
Literacy in Setswana	None	1359	24.48	8.69	4	46
	Did not complete Primary Education	790	25.49	8.51	4	45
	Completed Primary Education	1108	25.75	8.14	3	44
	Completed Secondary Education	741	27.04	8.04	1	45
	Completed Post Secondary Education	493	27.80	8.58	5	45
	Total	4491	25.76	8.48	1	46

The mean scores obtained by pupils with different categories of fathers are displayed graphically below.

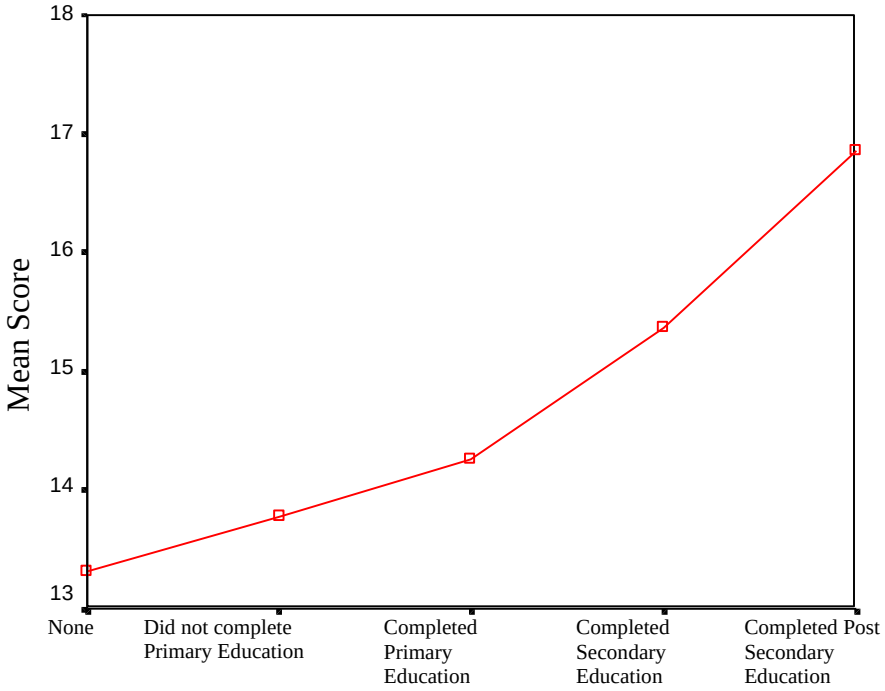
(a) Life Skills



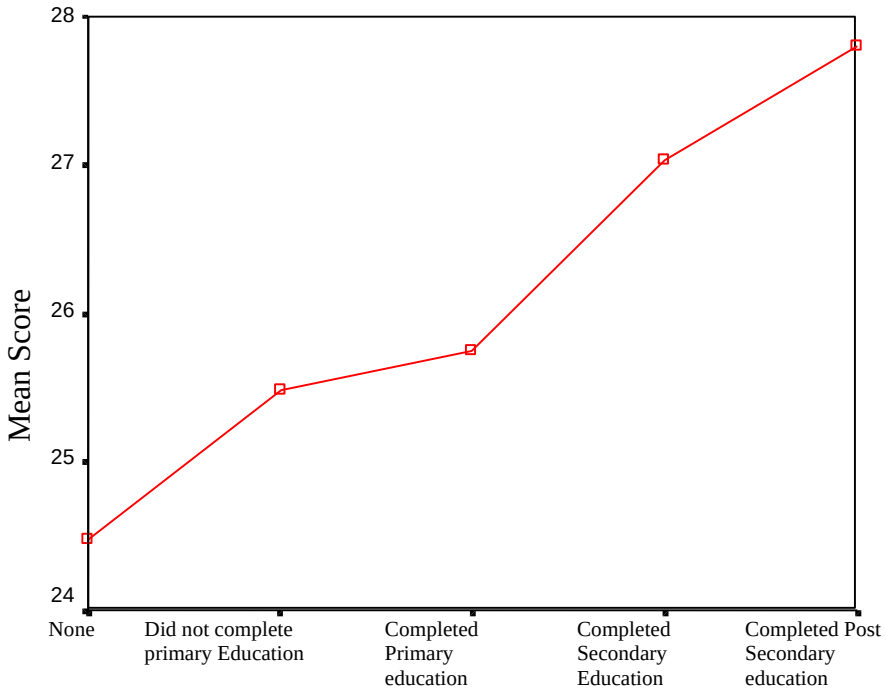
(b) Numeracy



(c) Literacy in English



(d) Literacy in Setswana



The differences in performance of pupils with fathers of different educational levels are statistically significant for each test. It can therefore be concluded that the higher the level of education of the father the better the performance of the child.

It can be seen that fathers' education has an important contribution to raising the performance of the pupils, particularly if the father has completed post secondary education. It is an obvious fact that better education usually leads to better jobs and pay. Better pay implies the parent has more resources for the education of the child.

5.3.2 Differences on the Basis of Mothers' Educational Level

The pattern of performance of the pupils according to the educational levels of the mothers is similar to that of the fathers' educational levels. The mean scores of the pupils by levels of mothers' education are presented in table 57 below.

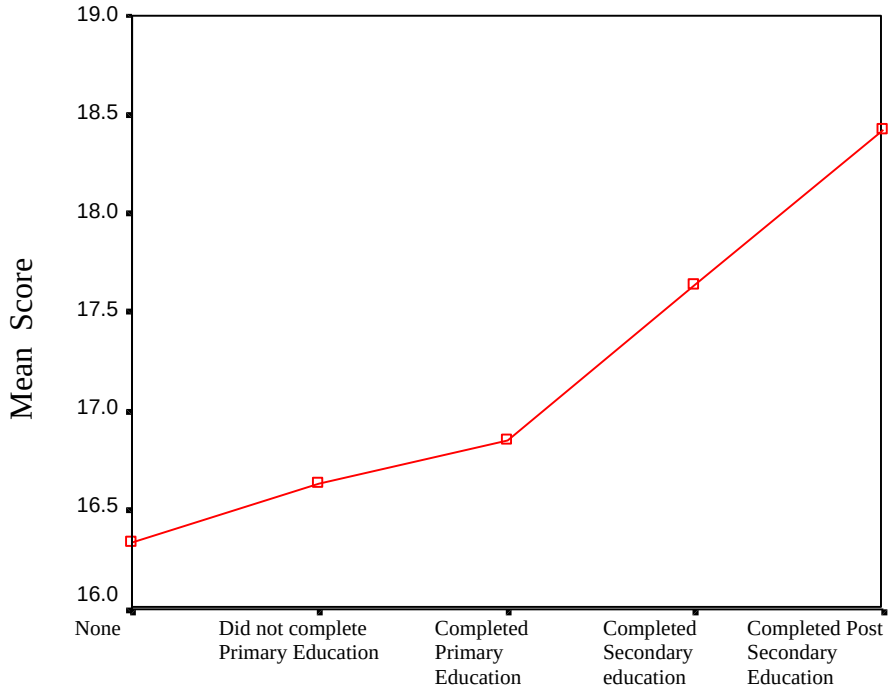
Table 57: Performance of Pupils by Groups of Maternal Educational Levels

Test	Educational Level	n	Mean	Std. Deviation	Minimum	Maximum
Life Skills	None	968	16.3419	4.53	5	28
	Did not complete Primary Education	889	16.6367	4.30	2	28
	Completed Primary Education	1791	16.8509	4.36	3	27
	Completed Secondary Education	1115	17.6359	4.34	2	28
	Completed Post Secondary Education	455	18.4198	4.49	6	28
	Total	5218	17.0245	4.43	2	28
Numeracy	None	969	13.3860	4.00	2	24
	Did not complete Primary Education	886	13.6016	4.08	2	26
	Completed Primary Education	1788	14.0694	3.94	2	25
	Completed Secondary Education	1121	14.9126	3.97	3	25
	Completed Post Secondary Education	456	15.9671	3.66	4	24
	Total	5220	14.2100	4.03	2	26
Literacy in English	None	964	13.0768	3.88	3	28
	Did not complete Primary Education	881	13.4790	3.96	1	26
	Completed Primary Education	1777	14.1795	3.99	1	27

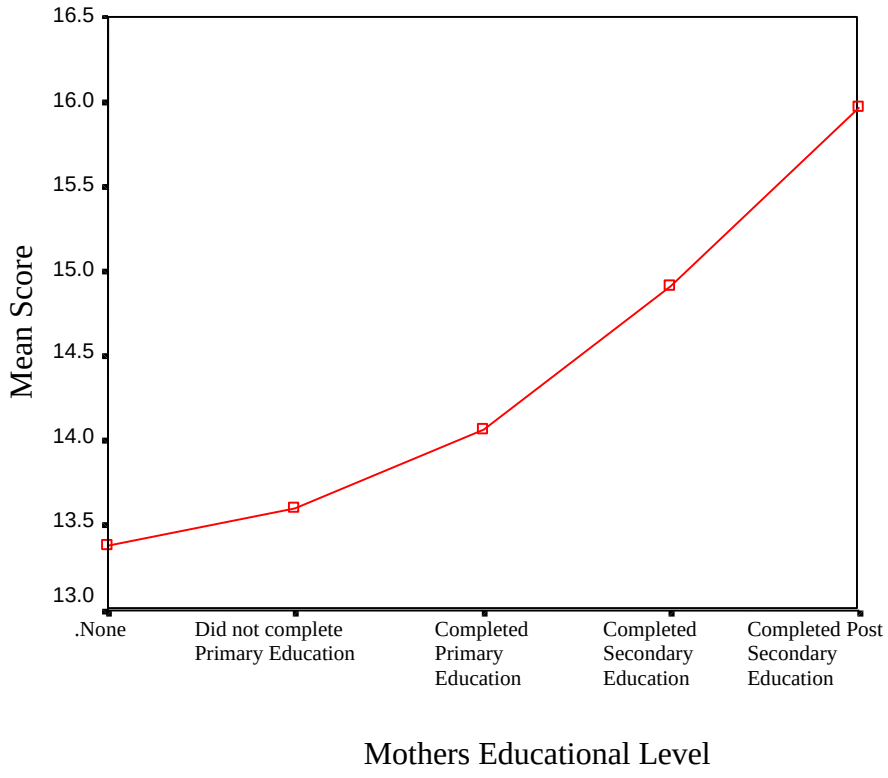
	Completed Secondary Education	1114	15.5269	4.47	4	30
	Completed Post Secondary Education	455	17.3516	5.29	5	30
	Total	5191	14.4230	4.38	1	30
Literacy in Setswana	None	941	24.0999	8.65	3	46
	Did not complete Primary Education	868	24.4839	8.60	3	45
	Completed Primary Education	1730	25.5780	8.31	1	45
	Completed Secondary Education	1070	27.2664	8.14	5	45
	Completed Post Secondary Education	410	28.9488	8.12	6	44
	Total	5019	25.7470	8.50	1	46

The mean scores of mothers of different educational levels are displayed graphically below.

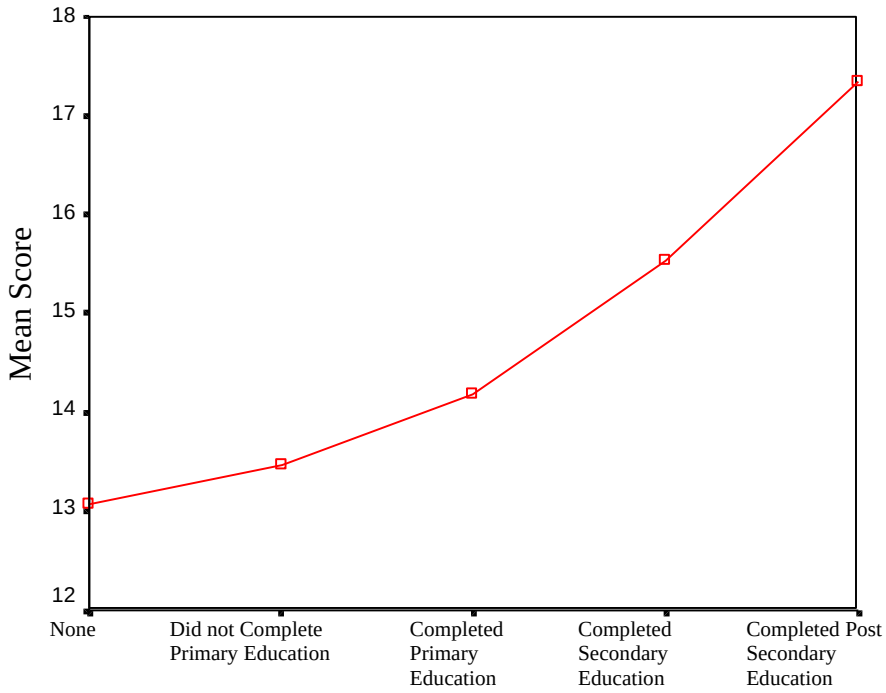
(a) Life Skills



(b) Numeracy

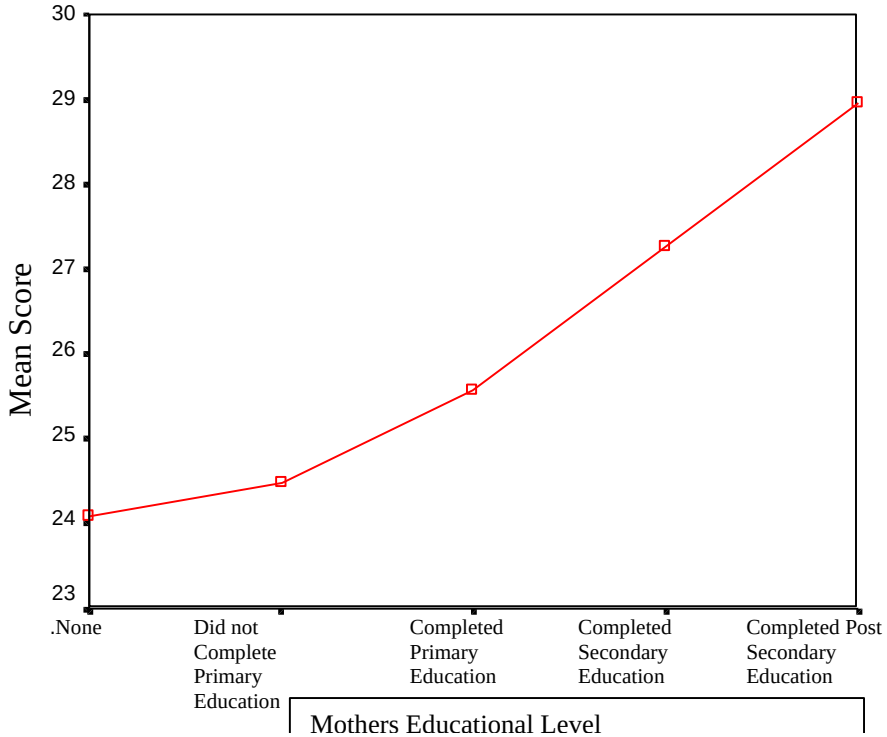


(c) Literacy in English



Mothers Educational Level

(d) Literacy in Setswana



Children of mothers with higher education tend to perform better than children of mothers of lower education. The differences are significant in all tests. It can therefore be concluded that the higher the educational level of the mother the better the academic performance of the child.

Primary education alone, completed or not, makes a small difference from having none. It is parents who completed secondary education that have children with much better performance.

Completing secondary education and beyond is associated with parents whose children tend to out perform children of parents with lower education. This may point to the path of improving the level of achievement of the pupils. It is conceivable that completing secondary education or better enables one to get a job, the major source of income. With a job, one can afford household amenities and goods. Educational materials like books can be purchased. Perhaps the opportunity to join library membership, help the children with their homework and participate in school activities becomes wider open.

Education may also inject something else into the parents/learners. The value of education may become more easily appreciated. This being the case, children may not be deprived of their learning time with tasks like helping with work at home.
It can be seen from the table below that when fathers have completed only primary education or lower, the performance of the pupils in Numeracy and Literacy in Setswana is marginally better than when it is the mothers with the same educational level. The reverse is true for Life Skills and Literacy in English. Once mothers complete secondary education or higher, the performance of the pupils is better in all subjects, than if fathers had the same educational levels.

Table 58: Mean Scores of Pupils When Grouped According to Levels of Maternal and of Fraternal Education.

(a) Life Skills

Educational level	Mean for Pupils with fathers at that level	Mean for pupils with mothers at that level
No Education at all	16.47	16.64
Incomplete Primary Education	16.74	16.85
Complete Primary Education	16.93	17.64
Completed Secondary School	17.51	17.64
Completed Post Secondary	18.31	18.42

(b) Numeracy

Education	Mean for Pupils with fathers at that level	Mean for pupils with mothers at that level
No Education at all	13.46	13.39
Incomplete Primary Education	13.91	13.60
Complete Primary Education	14.17	14.07
Completed Secondary School	14.87	14.91
Completed Post Secondary	15.57	15.97

(c) Literacy in English

Education	Mean for Pupils with fathers at that level	Mean for pupils with mothers at that level
No Education at all	13.31	13.48
Incomplete Primary Education	13.78	14.18
Complete Primary Education	14.26	15.53
Completed Secondary School	15.37	15.53
Completed Post Secondary	16.86	17.35

(d) Literacy in Setswana

Education	Mean for Pupils with fathers at that level	Mean for pupils with mothers at that level
No Education at all	24.48	24.10
Incomplete Primary Education	25.49	24.48
Complete Primary Education	25.75	25.58
Completed Secondary School	27.04	27.27
Completed Post Secondary	27.80	28.95

The data suggest that fathers with lower education or none are more supportive of their children's learning of Numeracy and Literacy in Setswana than mothers of equal education, while mothers of the same educational level are more supportive of the children's learning of Life Skills and Literacy in English.

Why should pupils of mothers who completed secondary education and beyond perform better than those whose fathers have the same qualifications?

A large percentage (37.36%) of the pupils in the sample are single parented by their mothers. Perhaps with more education mothers can earn enough and give greater support to the academic work of their children than if it were the father earning the same. The greater awareness of the value of education might motivate mothers more than the fathers to support the education of their children.

To what extent do fathers help children with homework compared to mothers? According to the information collected from parents, it is observed that 62.3% of the mothers regularly help their children with homework while only 35.6% of the fathers do.

This may also explain why the contribution of mothers with higher education to the achievement of the pupils is more than that of the fathers.

5.4 Performance in Relation to the Guardian a Pupil Lives With

Pupils who live in hostel or with friends are very few compared to the number of pupils who live with parents. Pupils who live with both parents performed better than pupils who live with the mothers only, fathers only or with a relative/other family. The mean scores are presented in table 59 below.

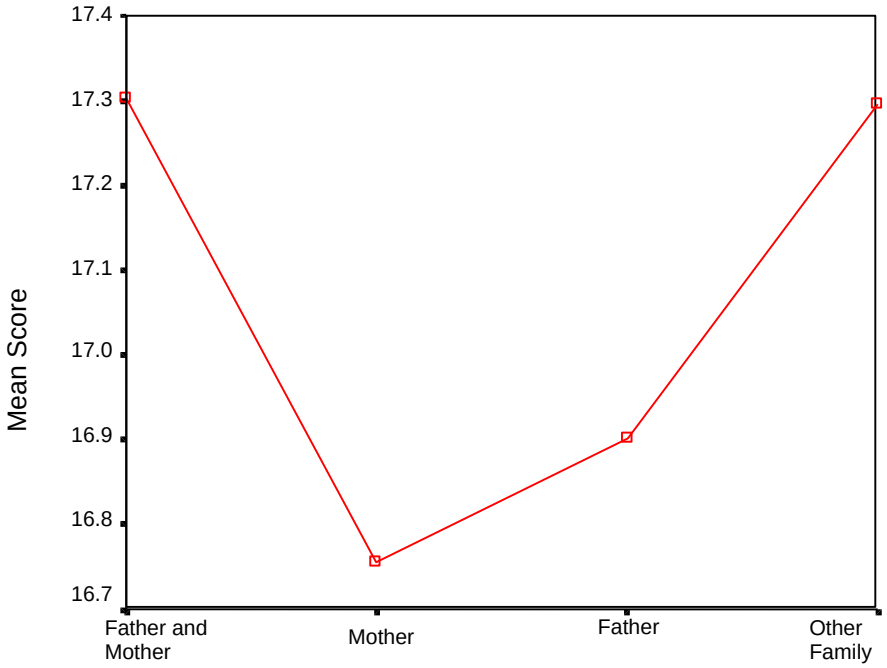
Table 59: Performance According to Type of Guardians Pupils Live With

Test	Guardian Living With	n	Mean	Std. Deviation	Minimum	Maximum
Life Skills	Father and Mother	2122	17.30	4.52	2	28
	Mother Only	2116	16.75	4.32	3	27
	Father Only	308	16.90	4.36	6	26
	Relative or Another Family	633	17.30	4.31	5	27
Numeracy	Father and Mother	2118	14.52	4.03	2	25
	Mother Only	2118	13.91	4.02	2	26
	Father Only	309	13.97	3.98	3	23
	Relative or Another Family	635	14.53	3.81	3	25
Literacy in English	Father and Mother	2117	14.83	4.67	2	30
	Mother Only	2101	14.07	4.12	1	29
	Father Only	310	14.22	4.20	2	29
	Relative or Another Family	624	14.54	4.21	3	28
Literacy in Setswana	Father and Mother	2012	26.52	8.42	3	46
	Mother Only	2041	25.04	8.48	1	45
	Father Only	294	24.74	8.23	3	42
	Relative or Another Family	617	26.41	8.30	3	45

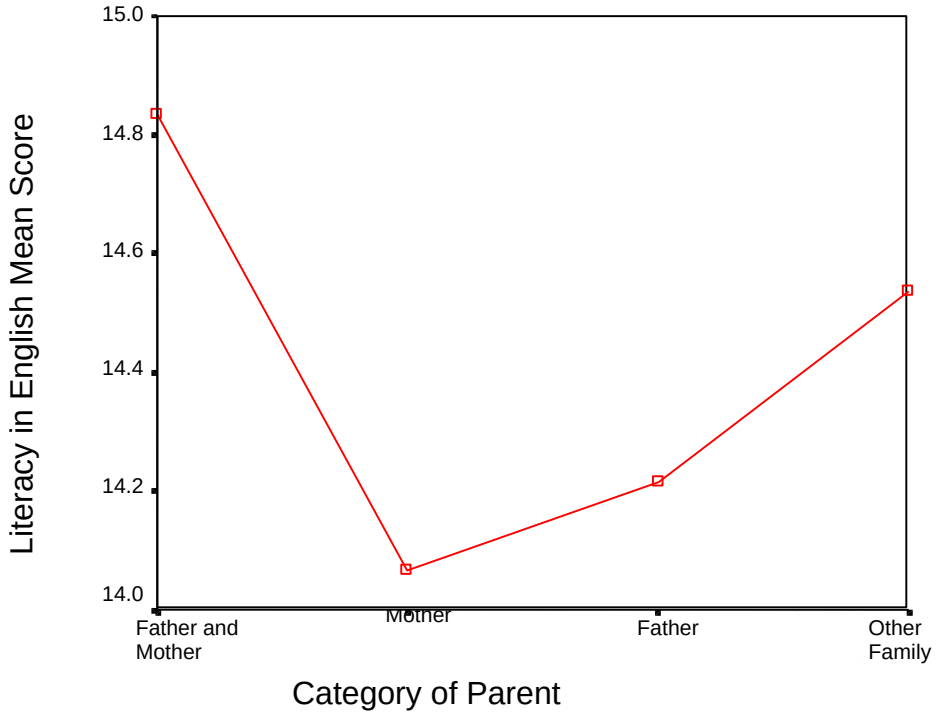
These means are presented graphically below. The indication from the graphs is that the pupils who live with both parents tend to do better in all tests than pupils who live with either the mother or the father only. Pupils living with another family or relative tend to do almost the same as pupils who live with both parents. Pupils who live with their fathers tend to do marginally better than pupils who live with the mothers, except for Literacy in Setswana where the mean of the pupils who live with the mothers is marginally higher than the mean of the pupils who live with the fathers.

Graphical Presentation of the Means for Pupils Living With Various Categories of Parents

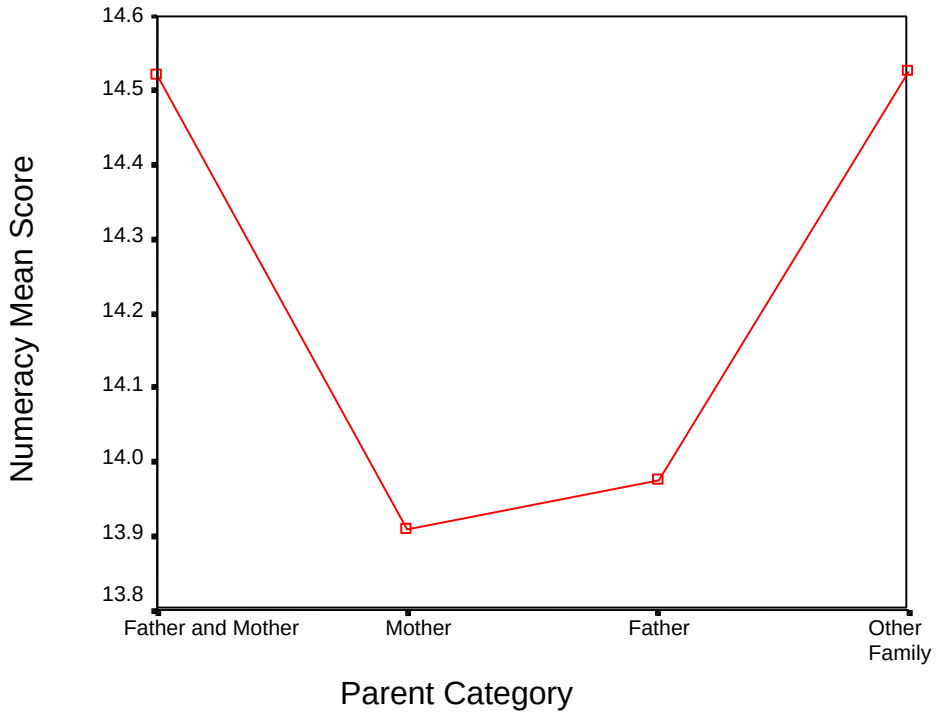
a. Life Skills



(b). Literacy in Setswana


15.0
14.8
14.6
14.4
14.2
14.0
Literacy in English Mean Score
Father and Mother
Mother
Father
Other Family
Category of Parent

(d). Numeracy



This data set brings out the need for both parents to foster the development of the child. Where only one of the parents lives with the child, the learning of the child lags behind. This has been found here to be particularly the case where the child lives with the mother. The reason for this cannot be provided by the data set, but possibly home provisions can be a factor if the mothers are less endowed than the fathers.

5.5 Regional Comparisons on Total Test Scores

The means and standard deviations of the total test scores per region are shown in table 60 below.

Table 61: Regional Means and Standard Deviations on Total Test Scores

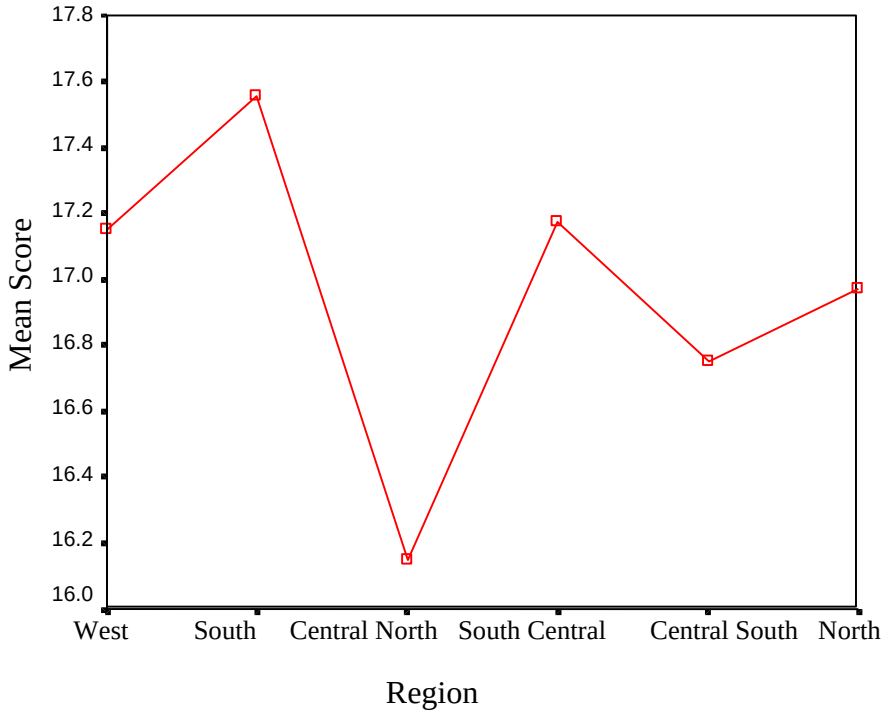
Test	Region Name	n	Mean	Std. Deviation	Minimum	Maximum
Life Skills	West	657	17.15	4.20	5	27
	South	813	17.56	4.68	5	28
	Central North	817	16.15	4.28	4	28
	South Central	1590	17.18	4.51	2	28
	Central South	1142	16.75	4.39	4	27

	North	526	16.97	4.23	2	26
	Total	5545	16.97	4.43	2	28
Numeracy	West	642	14.14	3.76	2	26
	South	807	14.80	3.92	3	24
	Central North	811	14.12	4.18	3	24
	South Central	1566	14.06	3.86	2	25
	Central South	1133	13.78	4.23	3	25
	North	520	14.44	4.17	3	24
	Total	5479	14.17	4.02	2	26
Literacy in English	West	643	14.15	4.45	3	30
	South	799	14.87	4.85	1	30
	Central North	806	13.98	4.21	2	28
	South Central	1561	14.48	4.14	2	28
	Central South	1132	14.19	4.33	1	27
	North	524	14.59	4.48	4	28
	Total	5465	14.38	4.38	1	30
Literacy in Setswana	West	617	24.46	7.93	5	45
	South	772	27.00	8.52	4	45
	Central North	740	24.40	8.50	4	43
	South Central	1489	26.90	8.28	1	46
	Central South	1124	24.50	8.77	2	45
	North	508	25.75	8.15	4	45
	Total	5250	25.65	8.48	1	46

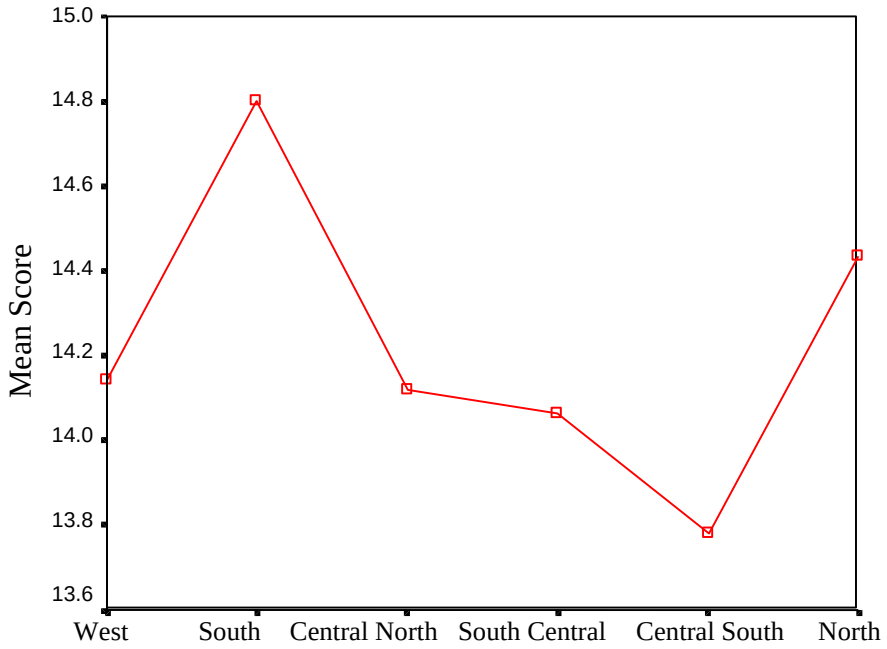
The means are represented graphically below.

Graphical Representation of the Regional Total Test Score Means

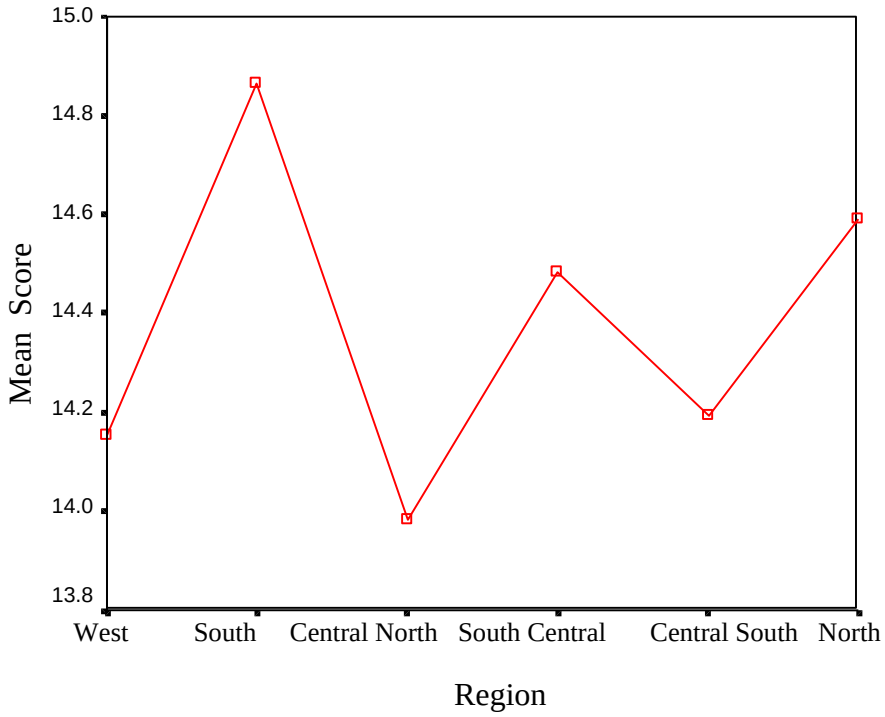
(a) Life Skills



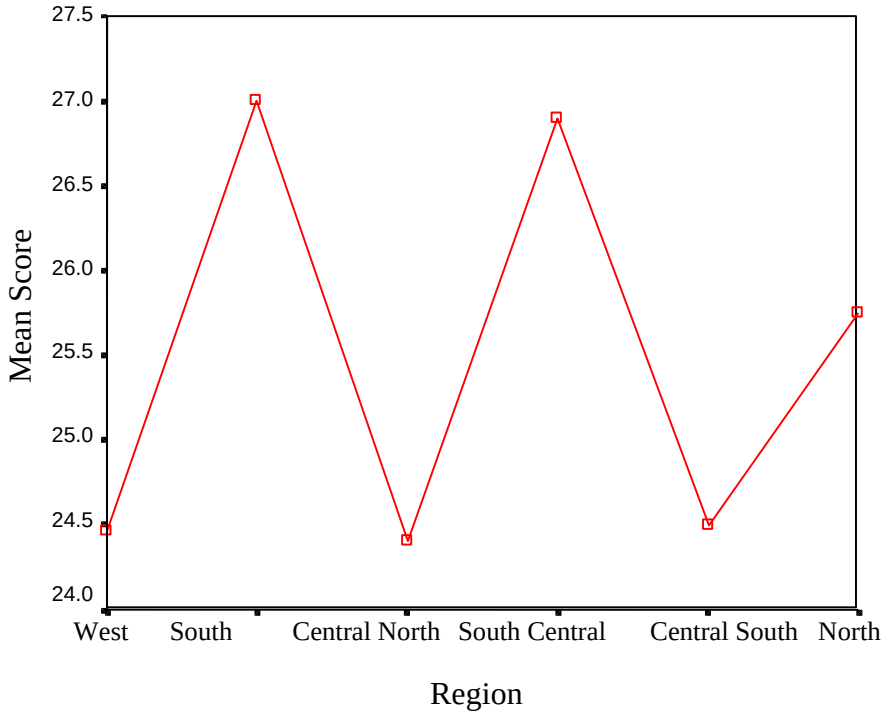
(b) Numeracy



c) Literacy in English



(d) Literacy in Setswana



The regions display similar means and standard deviations on all tests. The minimum and maximum marks attained are also comparable. However, there are differences. The differences between regions are significant in every test.

The South region performed consistently best in all four tests even where statistical significance was not attained. From the analysis, 13% of the pupils in the region speak English at home. The rest of the regions had below 10% of the pupils speaking English at home, the lowest being Central South with 6.5%. The second observation is that South has the highest number of pupils attending pre-school. Pre-schooling and the speaking of English at home may have contributed to the pupils in the South region out performing pupils on the other regions on all tests. Central North tends to lag behind in all tests, except in Numeracy where Central South obtained the lowest score. Though the regional disparities are small, they point towards a suggestion that educational inputs and levels of coordination have small variations from region to region.

5.6 Performance by Medium of Instruction Used in the School

A few schools in the country use English as the medium of instruction right from Standard One. These schools are referred to as English Medium Schools. The sample included three English Medium Schools, in proportion to their number in the country. The number of pupils in this category was 87. Their test scores were compared with the test scores of the pupils from Setswana Medium Schools. The mean scores are presented in table 61 below.

Table 61: Means and Standard Deviations of Total Test Scores of Setswana and English Medium Schools

Test	Instruction Medium	n	Mean	Std. Deviation
Life Skills	Setswana	5458	16.87	4.38
	English	87	23.25	3.09
Numeracy	Setswana	5393	14.10	4.01
	English	86	18.31	2.79
Literacy in English	Setswana	5379	14.21	4.19
	English	86	24.76	3.22
Literacy in Setswana	Setswana	5219	25.60	8.46
	English	31	33.97	8.20

English Medium Schools attained higher means and lower standard deviations.
The mean difference was highest for Literacy in English, followed by Literacy in Setswana. Differences due to medium of instruction can perhaps be easily appreciated with respect to the Literacy in English Test. The pupils who are taught in English right from Standard One and at the same time do Literacy in English as a subject should understand English more than pupils who are taught in Setswana and take Literacy in

English only as a subject. It should be an expected outcome that pupils in English Medium Schools performed better in Literacy in English than pupils in Setswana Medium Schools.

English is spoken in very few homes. The data indicate that 79.8% of the children in the sampled English Medium Schools speak English at home while only 6.9% of the children at Setswana Medium Schools speak English at home. This gives children at the English Medium Schools advantages over those in the Setswana Medium Schools. Instruction and speaking of English at home by English Medium School pupils may explain what is easily visible on the performance of these pupils, with deeper seated strategies for their achievements. There should be other factors that account for the variance observed.

It is noted, that the better performance of pupils in English Medium Schools covers all tests, including Literacy in Setswana. It is possible that factors such as socio-economic status of the parents, the home amenities, the teachers, the educational materials and classroom processes are better targeted at raising the academic achievement of the pupils in English Medium Schools.

English Medium Schools charge school and other fees. It is possible that the available funds enable such schools to acquire facilities that enhance learning. For the sake of improving academic achievement it is useful to document what makes pupils in English Medium Schools perform well. Could this be due to teachers, instructional strategies, provisions, class size, teacher qualification and motivation, home background, etc.?

5.7. Performance By School Type

When schools were grouped into three: Public/Government, Private/non-government and Government-subsidized, the English Medium Schools fell in the category of Private Schools. The mean scores of the three categories on the total test scores are indicated in table 62 below.

Table 62: Means and Standard Deviations on Total Scores by School Type

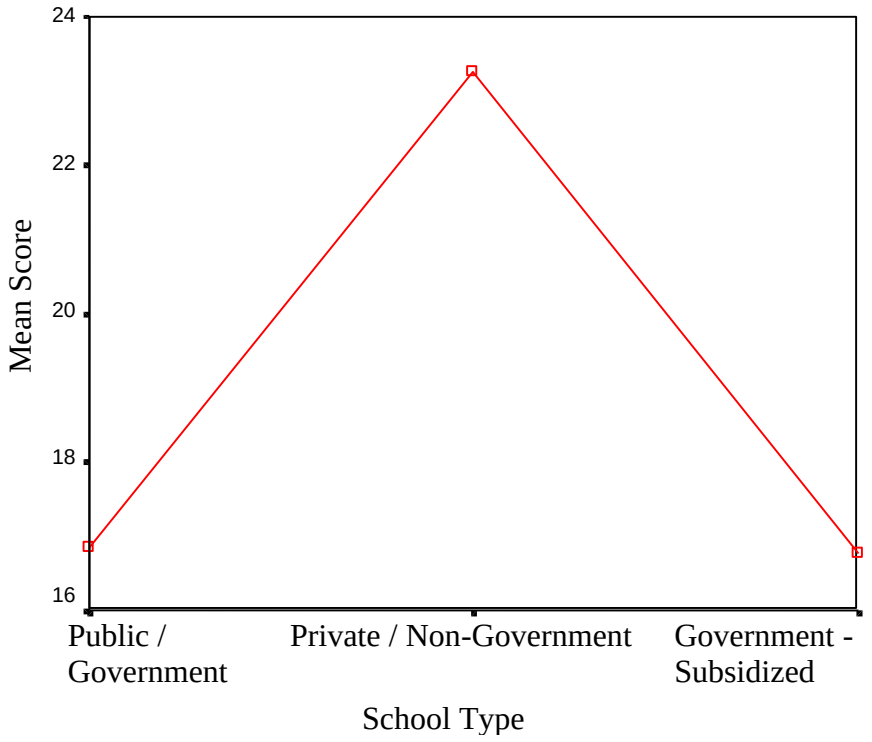
Test	School Type	n	Mean	Std. Deviation	Minimum	Maximum
Life Skills	Public / Government	4563	16.85	4.37	2	28
	Private / Non Government	87	23.25	3.09	9	28
	Government - Subsidized	597	16.76	4.46	4	27
	Total	5247	16.95	4.44	2	28
Numeracy	Public / Government	4562	13.97	3.97	2	26
	Private / Non Government	86	18.31	2.79	12	23
	Government - Subsidized	590	14.67	4.40	3	25
	Total	5238	14.12	4.04	2	26
Literacy in English	Public / Government	4539	14.08	4.11	1	29
	Private / Non Government	86	24.76	3.22	17	30
	Government - Subsidized	594	15.05	4.74	1	28
	Total	5219	14.37	4.39	1	30
Literacy in Setswana	Public / Government	4466	25.56	8.45	1	46
	Private / Non Government	31	33.97	8.10	16	45
	Government - Subsidized	523	25.33	8.73	2	45
	Total	5020	25.58	8.51	1	46

The means of Private/non Governmental Schools are the means of the English Medium Schools. These schools had higher means than all the other schools. There was no significant difference in the performances of Government and Government-subsidized

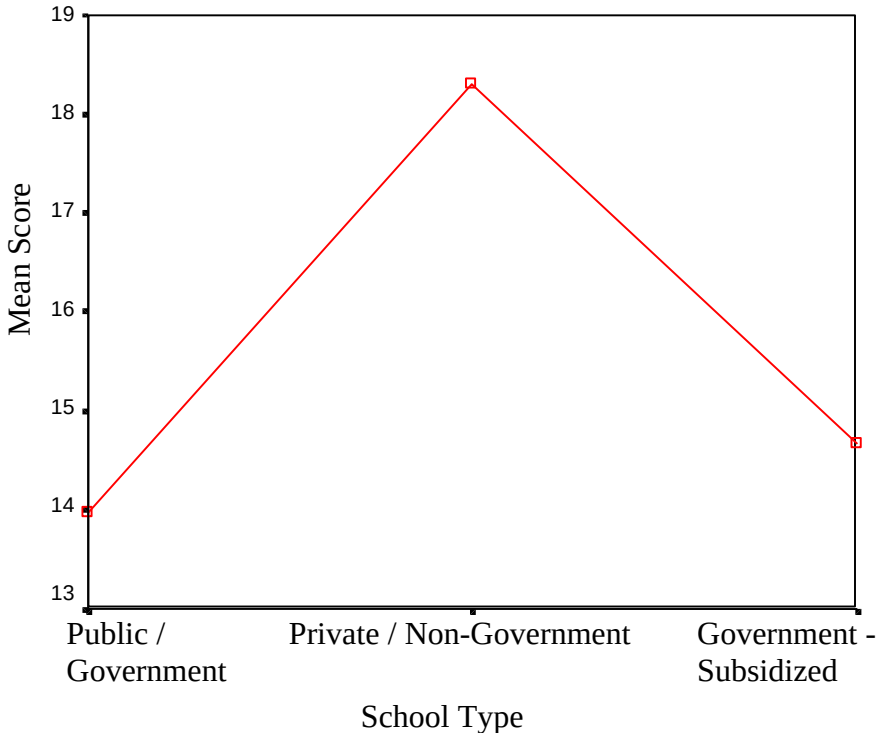
schools. It was the Private schools that had mean scores that were significantly higher than the Public or Government supported schools. The mean scores of the three types of schools are plotted in the Charts below.

Chart: Plot of the Mean Scores of Government, Private and Government Subsidized Schools

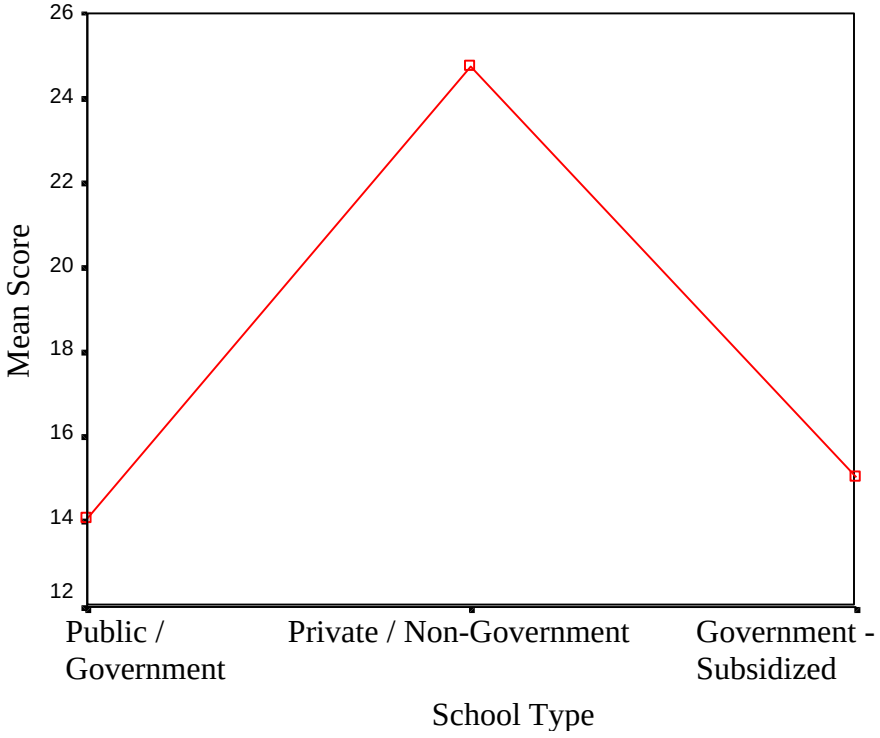
(a) Life Skills



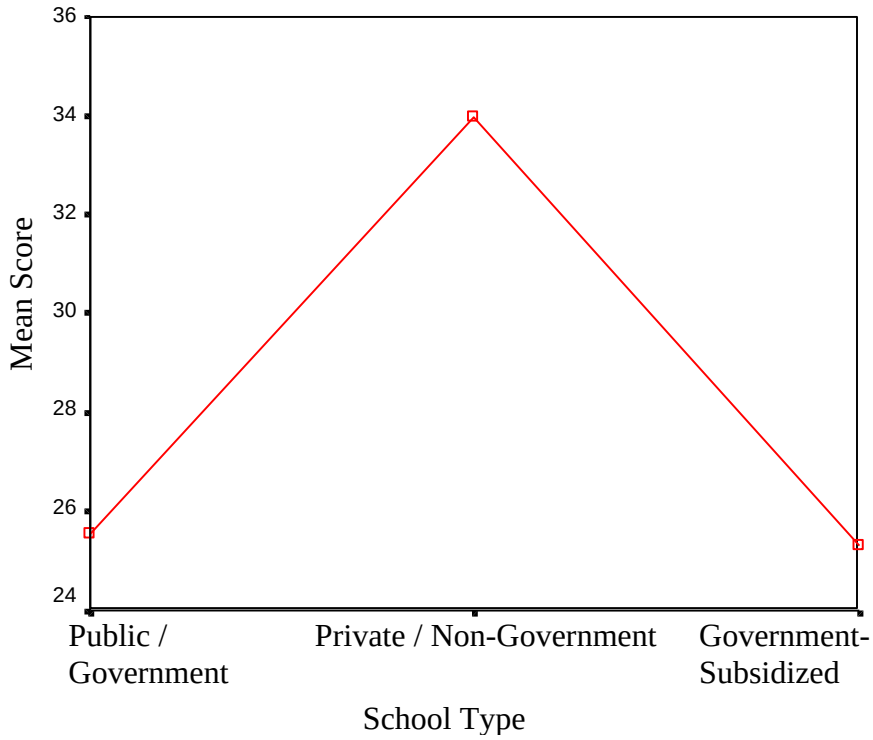
(b) Numeracy



(c) Literacy in English



(d) Literacy in Setswana



5.8 Differences Related to Teacher Absenteeism

The sampled schools were grouped into four as *Always*, *Sometimes*, *Hardly* or *Not at All*, on the basis of the extent to which teachers were reported absent. The mean scores of the four groups are presented in table 63 below.

Table 63: Means and Standard Deviations on Total Test Scores of Schools Grouped on the Basis of Teacher Absenteeism

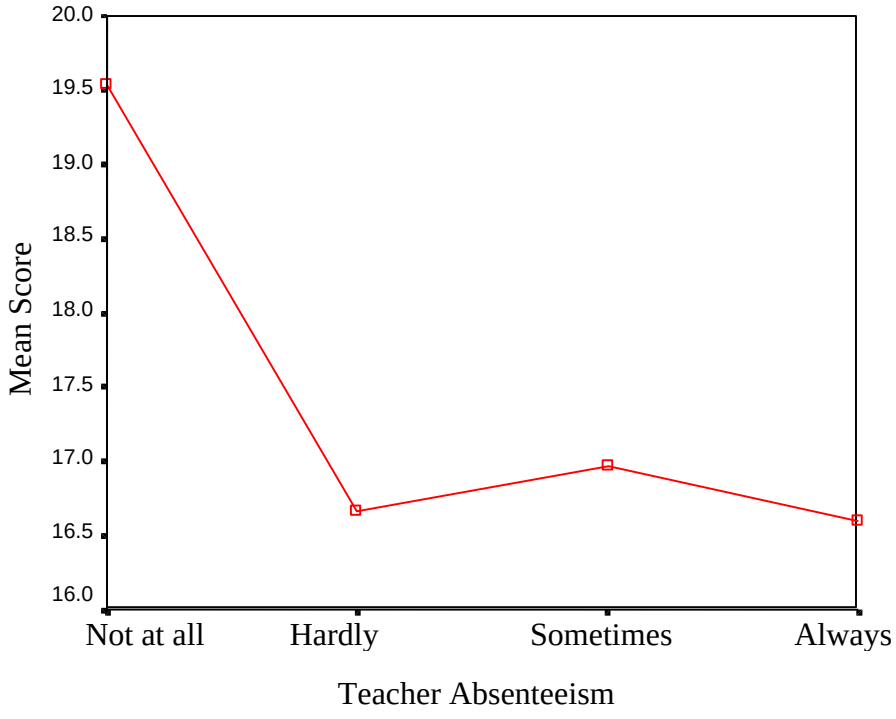
Test	Teachers Absenteeism	n	Mean	Std. Deviation	Minimum	Maximum
Life Skills	Not at all	317	19.54	4.57	5	28
	Hardly	1714	16.67	4.56	2	27
	Sometimes	2730	16.96	4.22	3	28
	Always	427	16.59	4.52	2	26
	Total	5188	16.99	4.43	2	28
Numeracy	Not at all	314	15.79	3.70	4	23

	Hardly	1704	14.57	4.04	2	25
	Sometimes	2738	13.79	4.00	2	26
	Always	426	13.83	4.09	3	24
	Total	5182	14.17	4.04	2	26
Literacy in English	Not at all	316	17.35	6.08	1	30
	Hardly	1700	14.33	4.27	3	28
	Sometimes	2722	14.14	4.18	2	29
	Always	425	14.11	3.86	2	26
	Total	5163	14.40	4.39	1	30
Literacy in Setswana	Not at all	261	28.55	8.65	6	45
	Hardly	1693	26.24	8.30	3	45
	Sometimes	2650	25.23	8.50	1	46
	Always	361	25.12	8.90	5	45
	Total	4965	25.74	8.51	1	46

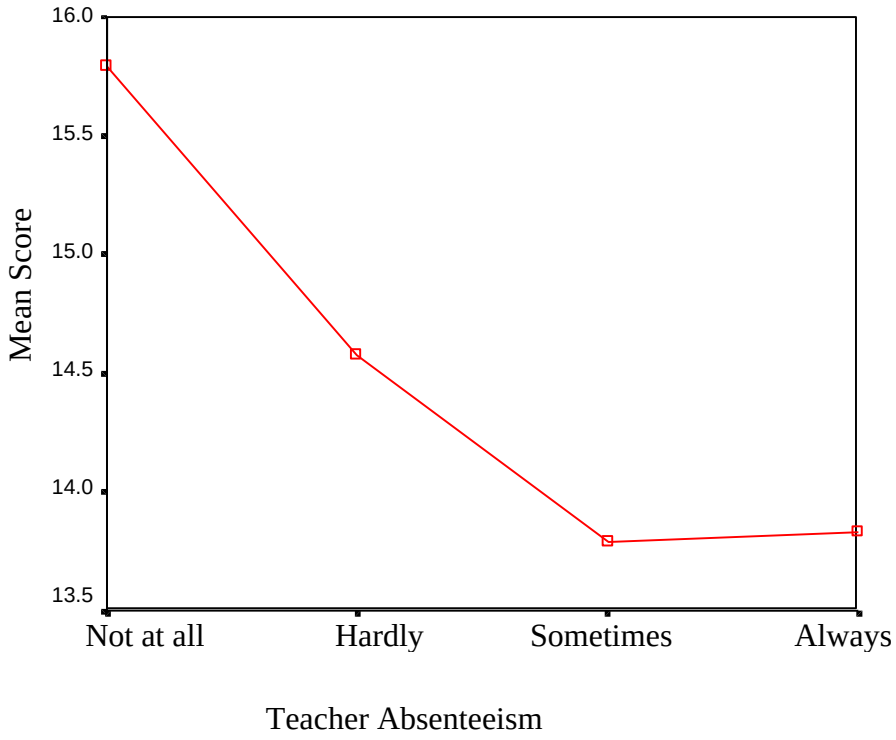
The means are plotted below.

Chart: Plots of School Means Grouped According to the Extent of Standard Four Teacher Absenteeism

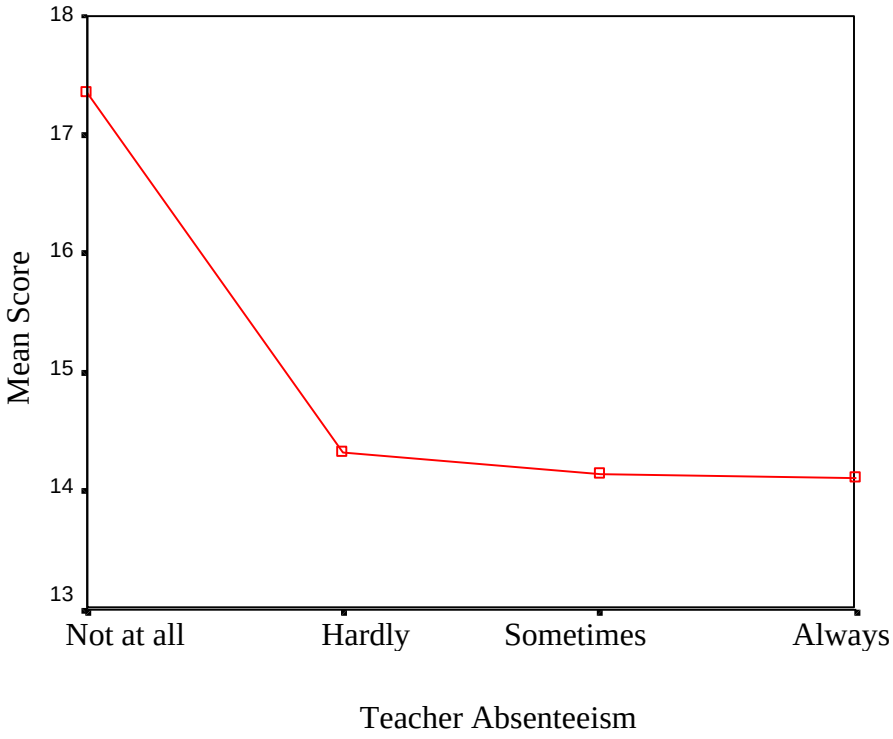
(a) Life Skills



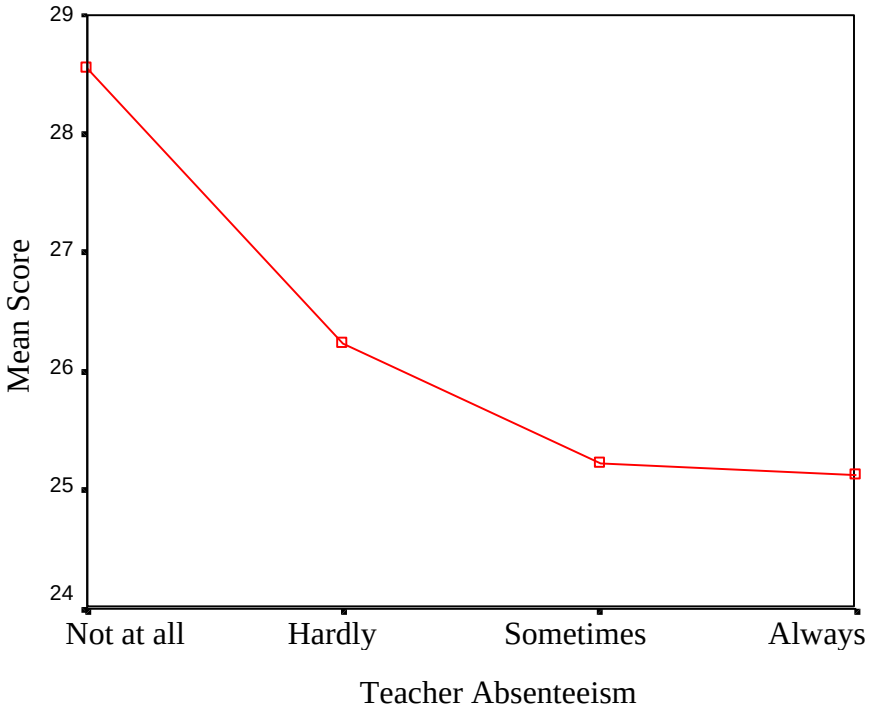
(b) Numeracy



(c) Literacy in English



(d) Literacy in Setswana



Schools where the headteachers reported that the teachers were not absent at all obtained higher means on all tests.

The presence of a teacher is critical in subject areas that require close guidance. In Numeracy, for example, achievement is quite high: it drops when absenteeism is 'hardly'. At teacher absenteeism 'Sometimes' and 'always' achievement becomes quite low. In all subjects, absenteeism from 'hardly' to 'always' is associated with depressed performance. It therefore looks like one of the areas where effort could be extended to raise academic achievement is to reduce teacher absenteeism to a minimum, except in cases of incapacitating illnesses.

5.9 Performance by Parental Living Location

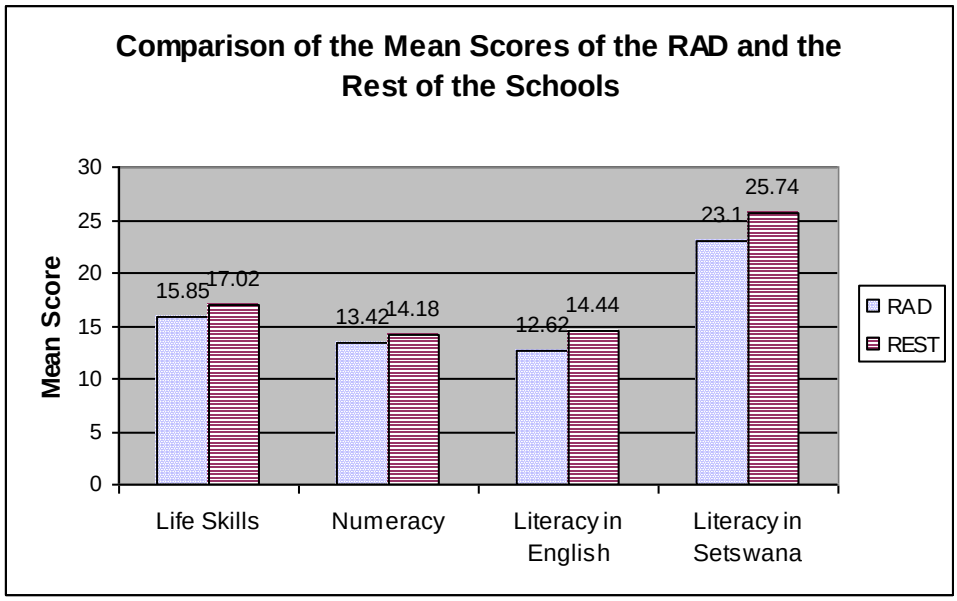
In the sample there were three schools which belonged to a category called the RAD schools. Botswana is a large country and some parts of it may not be easily accessible. Families in remote areas can be migratory, as they have to depend on hunting or labour in big farms in order to survive. People living in those areas are termed Remote Area Dwellers (RAD). Government, in collaboration with UNICEF, created a project to try and encourage the children from such areas to go and to stay in school.

Part of the aim of this project was to find out how the performance of the pupils from RAD schools compare with the performance of children in other parts of the country. Table 64below gives the means of the RAD schools and the rest of the schools in the country.

Table 64: Means and Standard Deviations of RAD and non-RAD Schools on Total Test Scores

Test	RAD status	n	Mean	Std. Deviation
Life Skills	Yes	213	15.85	4.24
	No	5332	17.02	4.44
Numeracy	Yes	209	13.42	3.96
	No	5322	14.18	4.03
Literacy in English	Yes	211	12.62	3.83
	No	5301	14.44	4.39
Literacy in Setswana	Yes	209	23.10	8.02
	No	5107	25.74	8.51

The mean score of the RAD schools is below the rest of the country in every test. The information is presented graphically below.



The differences are statistically significant in all tests. RAD schools therefore performed significantly below the rest of the schools on these tests.

5.10 Differences Due to School Location

Headteachers were asked to indicate whether their schools were Urban, Semi-urban, Rural or Remote Rural. The means and standard deviations on the total test scores for each category of schools are displayed in table 65 below.

Table 65: Means and Standard Deviations on Total Test Scores For School Groups According to Location

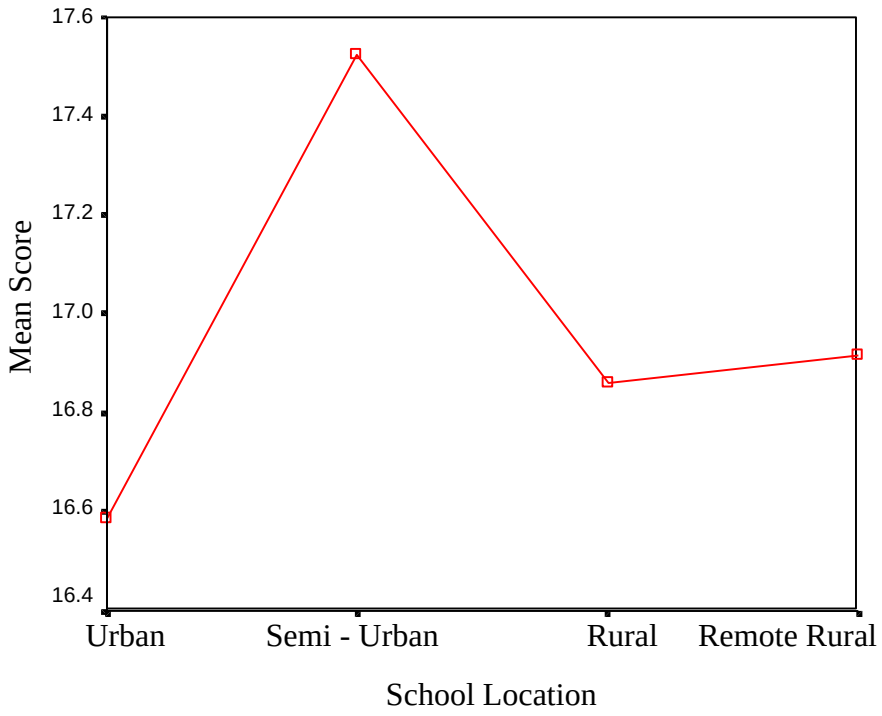
Test	School Location	n	Mean	Std. Deviation	Minimum	Maximum
Life Skills	Urban	1454	16.59	4.8812	2	28
	Semi Urban	1127	17.52	4.3887	2	28
	Rural	2119	16.86	4.2160	4	28
	Remote Rural	567	16.92	4.0647	5	26
	Total	5267	16.93	4.4415	2	28
Numeracy	Urban	1445	14.70	4.0048	3	24
	Semi Urban	1131	14.14	4.1113	2	25
	Rural	2119	13.74	4.0521	2	26
	Remote Rural	563	13.93	3.8162	3	24

	Total	5258	14.11	4.0454	2	26
Literacy in English	Urban	1448	15.18	4.7873	3	30
	Semi Urban	1123	14.83	4.4533	2	30
	Rural	2102	13.82	4.0945	1	27
	Remote Rural	566	13.34	3.7410	1	25
	Total	5239	14.36	4.3904	1	30
Literacy in Setswana	Urban	1341	26.61	8.3355	3	45
	Semi Urban	1099	26.06	8.8244	1	45
	Rural	2032	24.57	8.3887	2	46
	Remote Rural	567	25.63	8.3074	5	43
	Total	5039	25.56	8.5040	1	46

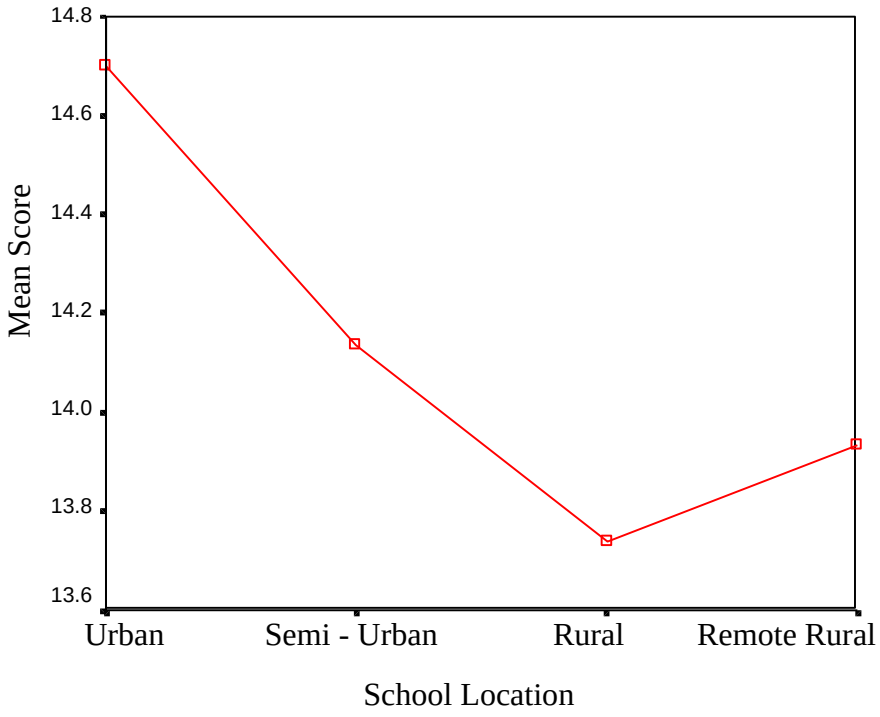
The means of the different categories of schools are presented graphically in the plots below.

Graphical Representation of the Means of Different Categories of Schools

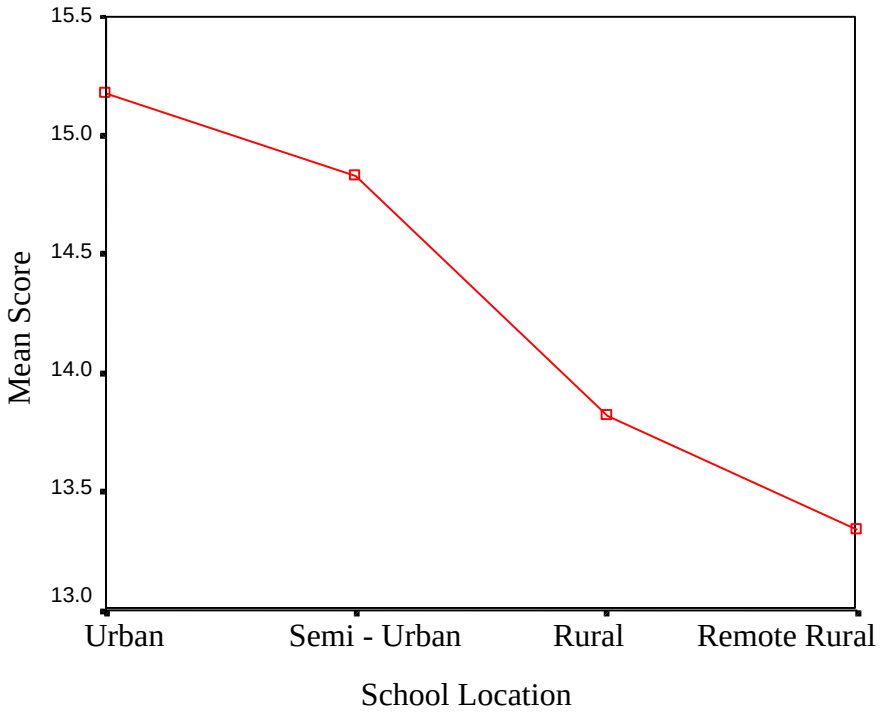
(a) Life Skills



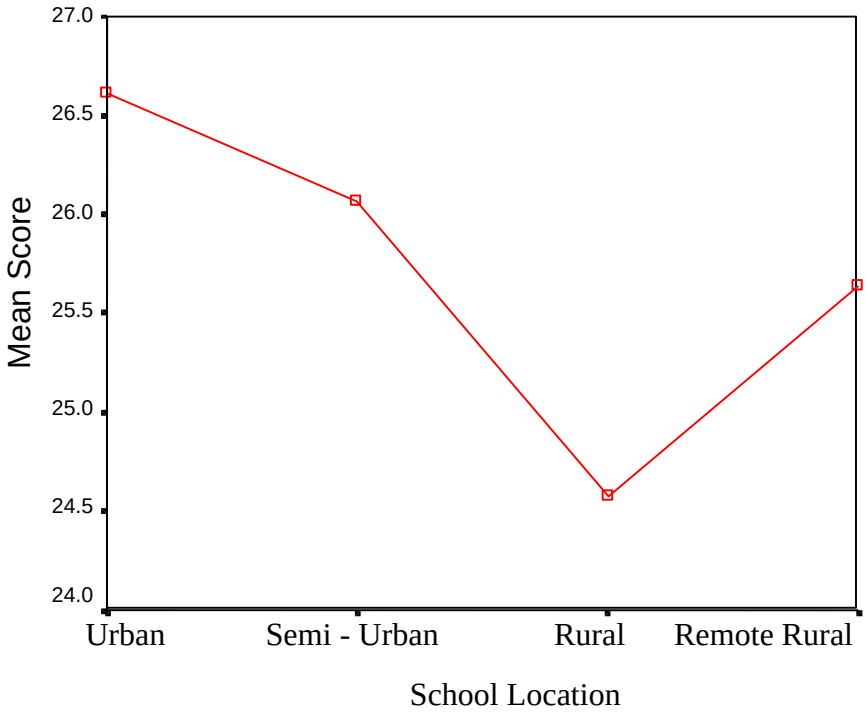
(b) Numeracy



(c) Literacy in English



(d) Literacy in Setswana



The differences are statistically significant for each test. Schools in Semi-urban areas performed significantly better than the schools in the other locations which had no statistical significance in the differences of their Life Skills mean scores. Urban schools performed significantly better than the rest of the school groupings on Numeracy. There was no statistically significant difference on the Numeracy mean scores of the rest of the school groups. Urban and Semi-urban schools had no statistically significant difference in their performance in Literacy in English, but the two groups performed statistically better than schools in Rural and Remote Rural areas. In Literacy in Setswana, pupils in Rural Schools performed significantly below the rest of the school groups.

5.11 Relationship of the Speaking of English at Home With Test Performance

A few pupils indicated that they speak English at home, while the majority reported they do not speak English at home. The mean score of each group on the four tests are presented at table 66 below.

Table 66: Means and Standard Deviations of Pupils Who Speak English at Home and Those Who do Not on Total Test Scores

Test	Speaking of English	n	Mean	Std. Deviation
Life Skills	Yes	432	17.06	5.22
	No	4837	17.09	4.31
Numeracy	Yes	433	13.95	4.54
	No	4839	14.28	3.93
Literacy in English	Yes	432	15.34	6.20
	No	4806	14.38	4.15
Literacy in Setswana	Yes	371	23.82	9.21
	No	4683	25.99	8.34

There is no significant difference in the performances of the pupils in Life Skills and Numeracy related to the Speaking of English at home. However, there is a small but significant difference in Literacy in English between the pupils who speak English at home and those who do not. Speaking of English at home confers a small advantage in the development of the language by the pupils. Similarly, pupils who do not speak English at home perform better in Literacy in Setswana than those who speak English at home. Since the majority of the pupils speak Setswana, it can be inferred that the speaking of Setswana at home helps the children to improve their competence in Setswana.

5.12 Relationship of Test Performance With Other Variables

The total test scores were correlated with the factors elicited in the Parent Questionnaire. Factors included home amenities, such as refrigerator, tap water, electricity, telephone, flush toilet, television, video, and computer; practices at home such as going to the library, engaging children in domestic chores, educational level of the parents; interest in schooling, and school variables, such as teacher absenteeism. Correlations ranged from .001 to .27. Most factors correlated highest with Literature in English, followed by Numeracy. The highest correlation was attained in Literacy in English and maternal level of education. Home variables correlated with test scores higher than school variables did as can be seen from table 68 below.

Table 68: Correlations of Various Factors With Total Test Scores

(a). Home Possessions and Services

Factor	**Subject**				**Average**
	Life Skills	Numeracy	Literacy in English	Literacy in Setswana	
Refrigerator	.10	.14	.22	.11	.14

Tap Water	.11	.14	.23	.12	.15
Electricity	.11	.17	.27	.12	.17
Telephone	.12	.16	.25	.11	.16
Flushing Toilet	.10	.14	.20	.11	.14
Television	.10	.15	.23	.12	.15
Video	.10	.13	.24	.09	.14
Radio	.20	.12	.10	.11	.13
Mean	.12	.14	.22	.11	.15

(b). Educational Support Factors

Factor	**Subject**				**Average**
	Life Skills	Numeracy	Literacy in English	Literacy in Setswana	
Earning of salary/wage/pension	.05	.10	.14	.09	.10
Fathers highest educational level	.13	.17	.25	.13	.17
Mothers' highest educational level	.13	.18	.27	.17	.19
Parents buying newspapers/magazines	.11	.13	.17	.14	.14
Number of books at home	.13	.15	.23	.15	.17
Mean	.11	.15	.21	.14	.15

(c). Within Pupil Factors

Factor	**Subject**				**Average**
	Life Skills	Numeracy	Literacy in English	Literacy in Setswana	
Sex of pupil	.13	.12	.17	.21	.16
Not liking School	.13	.17	.19	.18	.17
Looking after younger brothers and sisters	.11	.12	.09	.10	.11
Mean	.12	.14	.15	.16	.15

(d) School Environment Factors

Factor	**Subject**				**Average**
	Life Skills	Numeracy	Literacy in English	Literacy in Setswana	
Teacher absenteeism in the whole school	.05	.14	.13	.10	.11

Grade 4 teacher absenteeism	.07	.12	.11	.09	.10
Availability of Electricity	.05	.13	.19	.12	.12
Availability of computer	.07	.11	.19	.06	.11
Safety of the school environment	.12	.12	.14	.11	.12
Physical abuse of teachers	.10	.13	.11	.10	.11
Physical abuse of pupils	.04	.11	.16	.08	.10
Mean	.07	.12	.15	.09	.11

The numerous positive correlations point to the fact that improvement of educational quality cannot depend on one line of action since there are many factors that influence educational outcomes. No single factor alone accounts for all variations in academic achievement. Each factor contributes a little; some a little more than others. When the factors are all operating in a positive direction, then academic achievement can be improved. This can be looked at from the average correlations tabulated from the various questionnaires, none of which accounted for more than 9% of the variance observed in the test results.

From the Parent Questionnaire, the factors which had the highest average correlations over the four tests were mothers' educational level (.19); electricity, fathers' educational level and number of books at home (each .17); presence of telephone in the home (.16); presence of running tap water and television in the home (each .15); presence of refrigerator, flushing toilet and video in the home (each.14). These are variables of socio-economic status. It was established earlier on that the main source of income is salaries. Salaries come with jobs. The better-educated parents get jobs. Mothers' education beyond the primary level is particularly important, followed by that of the father. Getting a salary enables one to acquire telephone, electricity in the house, tap water, etc. These amenities provide environments that are conducive to learning, hence result in the children of such parents doing better than children of parents without the amenities.

The highest average correlations obtained from the Pupil Questionnaire were disliking school (.17); sex of the pupil (.16); purchase of newspapers or magazines by parents (.14); presence of radio and telephone at home (.13); and the presence of television at home. Again the factors of television, radio, telephone and newspapers are socio-economic status indicators. These come through the parents.

Most of the factors from the Headteacher Questionnaire have average correlations less than .10. However, the following factors can be brought out: presence of electricity in the school and safety arrangements in the school (.12 each); teacher absenteeism (.11 each); and abuse of pupils (.10).

Electricity is central to a lot of operations in a school or home. Besides providing lighting, a lot of appliances require electricity.

Teacher absenteeism was already discussed at length. These very young pupils cannot direct their own learning for an extended period of time without guidance. If teachers are abused in any way, they may not be able to do their best in helping the pupils learn.

Pupil abuse included a few cases of sex abuse as reported by the headteachers. One wishes it does not become widespread. If it does, then one cannot expect an improvement on learning achievement.

6. SUMMARY OF FINDINGS

The major findings from this study are presented here below.

1: to assess the level of attainment of Standard Four pupils in Numeracy, Literacy in English, Literacy in Setswana and Life Skills.

This was the primary objective that gave rise to the study: the need to establish the extent to which Standard Four pupils had learnt the competencies they were supposed to have learnt. The objective here was to establish the percentage of Standard Four pupils who are competent in Literacy in Setswana, Literacy in English, Numeracy and Life Skills. Most pupils did not reach the required competency levels.

The percentages of pupils who were found competent on the tests were as follows:

Literacy in Setswana	39.6
Literacy in English	21.9
Numeracy	21.2
Life Skills	77.7

Other than Life Skills, the percentages of the pupils found competent in the subjects are quite low. Literacy in English and Numeracy were the worst performed. Literacy and Numeracy are key components of any educational enterprise. The pupils were tested in September, before they completed Standard Four. It is a matter of conjecture as to whether a much higher percentage would have attained competency if they had been tested at the beginning of December.

While it could be argued that the pupils had had very little time to learn Literacy in English since instruction is in Setswana, the same lack of time to learn cannot be extended to Numeracy. Had they done well in Setswana, then it would hold some element of explanation that the pupils concentrated more on that subject which is the medium of instruction and which most of them speak at home. The assessment outcome here raises the same concern as were raised in 1977: academic achievement is quite low. Yet government has had a lot of input to uplift the attainment of the pupils. Quality education, as would be inferred from academic achievement, is not manifesting itself here.

At domain level, the pupils were found to be particularly weak in Interpretation and Mechanics of Literacy in Setswana. In Written Expression, 55.3% of them were competent while in Reading Comprehension 48.1% of them were competent.

The weakest domain in Literacy in English is Written Expression where only 7.2% of the pupils were found competent. The children were also weak in Reading Comprehension and Writing. In this subject, Grammar and Vocabulary were done best, with 71.3% and 74.2% of them attaining competency, respectively.

The lowest performance in Numeracy domains was in Arithmetic, with only 17.3% of the pupils being competent. One would expect that Arithmetic involves the most basic operation in Numeracy and therefore more pupils should have mastered it. The pupils who showed mastery in Geometry were 44.2 %. Performance here was best on Everyday Statistics (72.2), followed by Measurement (57.9).

Performance in Life Skills came as a little bit of a surprise. There is no subject in schools called Life Skills. But by learning the many other subjects they acquire skills that are useful in their lives. In Environmental Awareness, 96.7% were competent and 92.2% of the pupils were competent in Civic Sense. It was the domain of HIV/AIDS where the children did not fare well (51.6%). Since this is an area where the future of mankind hinges at the moment, there is concern that 48.4% of the pupils are not competent in this domain.

It may be argued that the competencies were above the pupils. A lot of care was taken to forestall this. Classroom teachers were involved in developing the competencies to be tested. It was the teachers who administered the tests and came with no adverse reports on the test items. Another area where a doubt could arise is in the levels of competencies that were established. Were the cutoffs too high? The core writing team battled with this question. It was noted that the Angoff procedure for standard setting compels the judges to look at individual items and make a judgement as to the proportion of a defined group of examinees will get that item correct. The teachers who were the judges were made to do the tests so as to gauge the difficulty of each item before beginning to make judgement. They made the judgements and those cutoffs were applied to the scores. The cutoffs for Life Skills were low in some of the domains, but the teachers involved had powerful arguments to defend their decision and could not agree to any suggestion of raising their scores above the guessing level.

2: to gather background information on the factors that influence the conditions of teaching and learning.

Most of the pupils in the sample fell within the range of 10 to 12 years, indicating that the policy of enrolling children in school when they are six years old is being implemented. The data indicated that in every region boys and girls were roughly equal in the sample. This implies that the two sexes had equal access to school. English is not widely spoken in the homes, with Setswana being the language most widely spoken in the homes. Pre-schooling is as yet at about 20% in every region, with the South inspectoral area having the highest percentage at 46.9, followed by South Central at 39.2%

The percentage of the pupils who stay with both parents is 40; 39.9% stay with their mothers and very few stay with fathers alone. Most of the parents who responded are mothers and many of them are young, including teenagers. Single parents constituted 38.2%. It was good to find that the majority of the parents were between 30 and 50 years of age because they are mature enough to raise children. The concern would be on teen-aged single mothers. The implication of getting children so early is that they engage in unprotected sex and drop out of school.

Most of the children get a meal before and after going to school, reflecting that feeding is not a problem. 88% of the schools report they have school feeding programme. Very few of the pupils reported that they eat only one meal a day. Pupils stay close to schools and take roughly 20 minutes to walk to school. The concern of building schools accessible to a scattered population seems to have been addressed adequately. They report liking school, with very little absenteeism. Teachers give them homework and the majority of them have someone at home to help them with the homework. Mothers help with the homework more than the fathers. Sisters are also more helpful than the brothers.

Sometimes the homework is not done. The main reasons given for this are helping with work at home and playing with friends. Radio and television listening is not a serious hindrance to doing homework. Most of the pupils do not go to libraries. Parents buy newspapers in some of the homes, but it is doubtful if the pupils read those newspapers. Most schools have no library room and up to 53.3% of the schools reported having no book loan services. This implies that the means of encouraging Literacy is minimal. Computers are few in schools (7.1%).

51.9% of the children reported that they participate in sports and cultural activities. Most schools have playgrounds, but reported lack of sports equipment. Perhaps with more equipment more of the pupils would be interested or get involved in sports and recreational activities.

Although most schools have no electricity, water is available in 85.3% of the schools. Medical facilities are available within 3km from the schools. Most schools have good toilet facilities, including flushing toilets in some of them. Though computers and televisions are rare, 79.4% of the schools have radios. The availability of water, feeding facilities, playgrounds, medical facilities, etc., indicate that government has done a lot to make schools health-promoting and therefore providing good learning environments.

Schools have chalkboards and chalk; teachers' desks and chairs; and pupil desks and pupil chairs/benches. Exercise books are available. Teachers' guides for Numeracy, Reading in Home Language, and General Studies are available in some schools. They feel there are more books lacking than available. Schools reported lack of typing, duplicating and photocopying machines. There is a possibility that these facilities are available at teachers' centres, which are not near every primary school.

Security installations are up to 5km away from schools. Vandalism is rare and the same applies to fire extinguishers, alarm bells and guards. What seem common are petty thefts. Hence the location of security installations away from schools does not seem to pose a big problem to the schools.

Physical abuse of teachers is said to be infrequent, but is frequent for the pupils. There is sex abuse of the pupils. Drug abuse is reported to be infrequent.

Household sizes are rather large, though most homes have one to two school going children. Most of the homes have permanent buildings, reflecting a fairly decent standard of accommodation. There is no electricity in most of the homes. 88% of them have radios. Motor vehicles, motorbikes and bicycles are rare in the homes. Most homesteads have cattle, though they do not depend much on these as a source of income. Income of the parents is mostly from salaries, wages or pension. Less than 50% of the fathers and mothers are working. Being mostly young, very few of the parents have working children.

The parents value the education of their children. They spend money on fees (there is free education), uniforms and books for their children. Most parents would still keep their children in school even if they won a lot of money from somewhere. They believe schools are providing good education for their children. It is their contention that boys and girls should be educated equally.

The percentage of fathers who never attended school at all was higher than that of the mothers (29.7 to 18.6). The percentages of fathers and mothers who had not completed primary education were 17.3 and 17, respectively. More mothers than fathers had completed primary education (34.3 and 24.6) and secondary education (21.4 and 16.8). A slightly higher percentage of the fathers than mothers had post secondary education (11.7 to 8.7).

Mature men and women, with a mean age of 50.24, head the schools. The youngest headteacher was 36 years old. The administrative experiences of the headteachers are wide. The mean age as heads of their schools then was 5.7. In the previous schools, they had been heads for an average of 9.2 years. The data indicate that the academic level of many of the headteachers was low. There were 29 who had primary education only. 31 of them had secondary education. Four had university degrees.

There are more female teachers in the schools than male teachers, with a ratio of about four to one. The ratio for Standard Four teachers alone was two to one. There are more qualified female teachers than male teachers (mean of 13.55 to 3.1). There are a few unqualified teachers in the schools. In-service courses are given to the teachers.

The schools sampled are not new and therefore should have a lot of experience in the instruction of pupils. The oldest school was founded in 1944. By 1963, 23.3% of the schools had already been founded. Most of the schools were founded after Botswana attained independence. Up to 1977, 45% of the schools had been founded. After the first National Policy on Education was adopted, a lot more schools were founded, so that by 1993, 95% of the schools in the sample had been founded.

The teaching force seems to be young and vibrant. Older teachers are fewer than the younger ones. The mean teaching experience of the teachers was 11.03 years. Most of the teachers had at least secondary education. 11.6% completed only primary education. From the available background information and the qualifications of the teachers and the available facilities, it would appear that instruction should take place effectively. Teachers reported that they spend a lot of time on lesson preparation, marking pupils' exercises, and doing remedial teaching. They assess their pupils a lot, using a variety of approaches. They reported that their immediate supervisors observe their lessons at least three times a year. There is therefore a lot of instructional activity going on in the schools. One would expect good achievement from the pupils.

Why then did the pupils do poorly on the tests? Teachers attribute poor performance to automatic promotion, family problems and parental indifference. However, parents had indicated they take interest in their children's education and many help the children with their homework and some attend school activities intended to raise academic achievement of the pupils. Are the teachers really interested in teaching? 58.2% of them indicated that they would change careers if they had the chance.

Performance of the pupils varied according to different subgroups. Female pupils outperformed their male counterparts on every test. Children whose fathers or mothers had higher education performed better than children whose parents had lower education did. The children of parents who completed secondary or post secondary education in general did better than the children of parents who completed only primary education or below. Completing primary education alone made some difference, but not much more than children whose parents did not complete primary education or had no education at all. The contribution of mother's education to the child's performance was more than that of the father.

Regional differences were detected . The South Inspectoral region tended to be on top on all tests, while Central North tended to lag behind, except for Numeracy where Central South performed the worst. English Medium Schools did better than the Setswana Medium Schools. English Medium Schools are private schools, which did better than the government/public or government sponsored schools.

RAD schools performed slightly poorer than the rest of the schools, with the mean difference being largest in Literacy in Setswana. Schools in urban areas tend to do better than schools in peri-urban or rural areas.

Teacher absenteeism was found to be a factor in the performance of the pupils. Teachers miss school up to five days a year. Where teachers are never absent, the pupils did best, compared to schools that reported that their teachers are either sometimes or always absent.

Correlates of academic achievement were found to be many. These factors included teacher characteristics, school facilities, teaching/learning materials, home characteristics, school environment and affective attributes of the pupils. No single factor was found to correlate highly with achievement, implying that in promoting educational achievement, action cannot be taken on only one variable and claim to have taken sufficient action for improving the quality of education. A multidisciplinary approach needs to be taken. The factors that had a correlation of at least .20 with at least one of the tests were home amenities such as refrigerator, tap water, electricity, telephone, toilets and video. These are factors associated with the socio-economic status of the child's environment, mostly the home. Most of the factors correlate better with Literacy in English than with the rest of the tests.

3: to generate information for intervention in the education process

A lot of data were collected for this project and the analysis which has been carried out has enabled this report to be written. Over the years, the data can be analysed in a variety of ways, focusing on particular aspects needing information. Of immediate interest is error analysis, to detect the kind of mistakes or the misconceptions pupils have and which therefore prevent them from scoring highly on the tests. This information would arise from the study and would help teachers and inspectors focus their attention better on what needs to be corrected.

A lot of information generated is contained in the report and can also be extracted for immediate use. The overall finding that the pupils are not reaching the competency levels established by their teachers needs to be communicated to the teachers as fast as possible. This should help them to realise that there are standards they are not meeting even though they report that they are working very hard. Reasonable facilities have been provided and one would expect better results. The results suggest that the instructional processes need to be monitored closely by the inspectors so that they can guide the teachers where the teachers are failing to stimulate the children into learning.

If it is not the teachers who are accountable for the low performance, is it the parents as alleged by the teachers? Parents seem to be giving domestic work to their young children and therefore reducing their time for doing their homework. Children report that part of the reason they do not do their homework is that they play with friends. Children have a responsibility to help their parents to the best of their ability. They have the right to play. But none of these should be permitted at the expense of the educational advancement of the pupils. This can be tackled through sensitization of the parents.

It is reported that there is some degree of abuse, both physical and sexual. From the study it does not come out as rampant. But it does not have to become widespread before action can be taken.

Part of the action that should be taken for the advancement of education arising from this report may be long-term planning. The study has brought out the fact that education of the parents enhances the academic advancement of the pupils. The advantages that education can confer on a family are well known. The study therefore brings out the need to help more pupils to complete primary education and continue up to post secondary level. They are the parents of tomorrow. The benefit of having mothers with higher education was brought out well by the study. Girls who engage in early marriage and child bearing are reducing the chances of bringing up children that would do well in school and lead productive lives thereafter.

Without having to present the evidence all over, the summary of findings is a useful point for a quick glance into what action needs to be taken in order to improve the quality of education. The reader can then go into the body of the report to gather the evidence and details of what the findings are. In this way, suitable remedial actions can be planned and thereby help the process of improving the quality of education. It is not a pleasant thought to think that the nation was concerned about the quality of achievement in 1977 and in the year 2000 this report is bringing out the same picture. The findings should therefore be scrutinised and important elements taken up before the report gathers dust.

4: to lay down a foundation for subsequent monitoring of education

Assessment and monitoring is one of the cardinal resolutions arising from the current RNPE. This study has gone through the processes of defining competencies, developing and refining tests and questionnaires to assess pupils on those competencies and to gather background information from various sources. The whole process of instrument preparation and data collection involved a number of stakeholders, including classroom teachers. The effort has resulted in the information that this report has generated.

Monitoring the progress of education is very important to the process of improving the quality of education. The current Standard Four Assessment is well known. It does not plough back into the system the information that is generated by it. This study should now form the basis of national assessment, which should be carried out at specified intervals of time in specified classes. For Standard Four, this report should form a baseline to which future assessment outcomes can be referenced. Efforts should be exerted on developing sound instruments so that tests from one assessment can be equated to tests of other years. In this way it will be possible to tell whether education is performing better on the basis of student competency rates. The country is participating in Southern Africa Consortium for Monitoring Educational Quality (SACMEQ). SACMEQ project is really doing the same thing as MLA. The procedures used and

information obtained from the project should reinforce this report so that a solid plan for a national assessment programme can be established. In this way the resolution of monitoring the performance of education will be implemented.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusion

This study has shown that a number of national education policies are being implemented successfully to a large extent. Equity is one of the policies in the RNPE (1994) document. This policy has been attained in many ways. The percentage of boys and girls enrolled in schools is basically the same. This is the case in every inspectoral region and is therefore a countrywide attainment. While in some developing countries girls' enrolment in school lags behind that of boys, Botswana has attained the ideal of giving equal access to schools by both sexes. Even parents value the education of their children and believe that boys and girls should be educated equally. Girls did outperform boys on the tests, but the statistically significant difference may not have a lot of practical importance. Boys lag behind girls, but only marginally. A little encouragement of boys to play less and to convince the parents that the workload at home should not pile on boys can easily bring them at par with the girls.

The government of Botswana has thus scored considerable achievement with respect to providing universal access and equal opportunity for boys and girls to basic education. The proliferation and strategic location of schools has enabled most children to live near schools, thereby encouraging both sexes to walk to school. Periodic surveys would inform government on development trends of issues surrounding equity and retention of pupils in school and possible relationship to their performance.

A lot has been done to have quality schools and quality learning. Schools are well established with water, toilets, and electricity in a few of them. Health facilities are not far from schools. Most headteachers reported they had buildings with sufficient ventilation. Scholastic materials are made available, though they may not be enough. Book loan facilities and teachers centers have been established. These are all evidence of efforts made to have quality schools where quality learning can take place.

Botswana is a vast country, with a small population. A problem seen in 1977 was how to rationalize schools so that children would not have to travel long distances to get to schools. Pupils in the sampled schools reported they live within 2km from school and take about 20 minutes to walk to school. At least one school in the sample is located in a village and caters for children whose parents are remote area dwellers (RAD). The children are collected at the beginning of a term and stay in boarding till the end of term. The problem that was identified in 1977 of locating schools so that pupils would easily get to them has therefore been solved effectively. With short distances to travel, children can concentrate their energies on studies since they will not have been physically tired in travelling to school.

It is in the area of learning achievement of the child that the study found reason for concern that the massive effort is not producing quality achievement. The percentages of pupils who are competent in Literacy in English, Literacy in Setswana, and Numeracy

are quite low. An explanation has been suggested that though teachers give children homework, the homework is not taken seriously because children are given domestic chores at home and they also like to play with their friends. This comes from the pupils themselves, who know why they do not complete or do their homework. Teachers blame parental indifference for the poor performance of the pupils. Homes are also not supporting academic work in that reading materials are rare and library facilities are not available or made use of by the pupils or parents where they are available. Though parents value the education of their children, this education is apparently expected to take place mostly in school and not at home. Parents report that they help their children with their homework, but the intensity of this help may not be strong for all the parents. Some parents with only primary education or no education at all may not be able to help their children do their homework. Children with parents who attained secondary education or higher did better than children whose parents had less education. Part of the explanation could be that these parents are able to help their children with their homework. These are the parents who are most likely working and therefore able to make educational facilities available in the homes.

Learning of the pupils, however, should not depend on doing homework. What about the time the pupils are in school? Are they being guided to make effective use of their time: to play with friends, make use of reading materials available in school, do some class-work which the teacher can correct there and then to show the pupil where his/her strengths are? What is the nature of the teaching/learning transactions in the schools? Are the teachers supportive of the learning of the children? Are the instructional activities pupil centred? The level of performance exhibited suggests that the answer to the above questions is 'no'. 58.2% of the teachers would leave teaching if they had a chance. Such teachers could feel that they are in the classrooms merely to earn a living. If this were the case, the total dedication to maximizing the learning of the child may not be realised.

Pupils in English Medium Schools did much better than the pupils in Setswana Medium Schools. It is unlikely that these children did well merely because they are taught in English. There should be a certain spirit in these schools, which makes the teachers interested in what they are doing. There is need to establish the instructional approaches of the teachers in the two types of schools in order to assess the extent to which the teacher's own actions can promote or demote learning of the pupils.

Teacher absenteeism is associated with performance. Where the teachers are absent, pupils may rather play than study on their own. Without learning, performance goes down. The young pupils need guidance so that their attention does not go away from what they are supposed to learn.

Cases of pupil abuse were reported. Though the reported cases are not alarming, any type of abuse on one child can result in pupils' interest in schooling being reduced. They cannot learn under these conditions.

7.2 Recommendations

In the light of the findings from this study, the following recommendations are made for the purpose of trying to enhance the learning achievement of the pupils:

1. **A National Assessment Programme should be instituted**.

   A national assessment programme aims at collecting accurate and timely information on the performance of an educational system. The design of the assessment maximises the sampling of the curriculum while an individual learner responds to only a sample of the items on the instruments. Testing time on individuals is thus minimised since accuracy of assessment of the curriculum and not of the individuals is the point of emphasis. From the sample of tasks and pupils, generalisation can be made about the performance of the curriculum and the pupils collectively. A national assessment programme will be in fulfilment of the policy of Assessment and Monitoring (RNPE, 17b.).

   The Primary School Leaving Examination is a terminal assessment Programme and is not of much help to the pupils who take the tests. The information derived therefrom can only be used to help the pupils who are in lower classes. The Standard Four Achievement Testing Programme is designed to avail teachers with ready-made tests which they can use to decide on pupils who would be at risk if they were allowed to proceed to the next class.

   In implementing the national assessment programme , background information would consistently be collected. Anchor tests would be established the first time the assessment is conducted so that future tests could be equated to them. In this way, it will be possible to tell whether the quality of teaching and learning is improving. The recommendation here would assimilate the MLA and Southern Africa Consortium for the Monitoring of Educational Quality (SACMEQ) projects in which Botswana is currently participating.

2. **Continuous Assessment should be instituted**.

   This is one of the policy decisions that wait to be implemented (RNPE, p17 & NDP 8, p.364). A structure should be put in place to enable Continuous Assessment to take off. Continuous Assessment should be taken as an instrument of instruction and not as part of the summative assessment. It should be used to help the teacher identify where his/her teaching has been effective and where there are learning difficulties.

   The recommendations of National and Continuous Assessments are ways in which assessment can be a strong instrument of instruction and therefore help to raise the

standard of instruction and learning. In this way the poor performance that has concerned the country for years may be rectified.

The support from Primary and Teacher Training and Development Departments is important in utilising information generated from the assessments. Curricular revisions will draw a lot of insight from the findings of this programme.

3. **Government should expeditiously implement recommendation 9 – 11 RNPE (1994), which calls for the development of pre-primary education programme.**

This would hopefully provide the basis and motivation for further learning with consequent improvement on children's performance. The South Inspectoral Region performed best in the tests and had 46.9% of the pupils in the sample having attended pre-schools. It is considered here that pre-schooling may be one of the factors that gave the South region an early lead over the rest of the regions.

4. **Parents should be sensitised on the education of their children.**

The Department of Primary Education should develop a programme for sensitising parents, so that the parents are aware that a child who sits down at home to do her homework is not lazy or of no value to the family. If children go home with homework and spend the entire time helping their parents with domestic chores, the learning that the homework was intended to reinforce will not take place. In a similar way, unrestricted time for play may prevent the child from learning at home.

The importance of participation of children in family life is acknowledged as a significant part of family life education and socialisation process. The significance of play in the physical and cognitive development of children cannot be underrated. However, work and play should facilitate rather than hinder learning. Guidance and Counselling Programmes could be used to sensitise parents.

5. **What obtains in English Medium Schools should be emulated by government, or government supported schools**.

English Medium Schools outperformed Setswana Medium Schools. There should therefore be processes in the former category of schools that promote better learning than in the latter category. Factors conducive to learning in English Medium Schools should be documented and emulated by government or government supported schools.

6. **There should be more focus on the Remote Area Dweller (RAD) schools**.

UNICEF is giving attention to these schools, but yet they are a little behind the rest of the schools. The Ministry of Education, together with UNICEF, should look at the

schools closely and see if there are any problems that can be tackled so that the learning of the children in those schools is enhanced.

7. **The recommendation of 30 pupils per class should be implemented**.

   Some classrooms have more than 40 pupils at the moment. Restricting class size to no more than 30 (RNPE, p. 19) pupils will make it more practical for a teacher to give individual help as required by the principles of remediation.

8. **All schools should be manned by qualified teachers only**.

   It is good development that there are few unqualified teachers in the field. However, the teachers reported by Headteachers as unqualified should be evaluated for eligibility for professional training or upgrading.

9. **Teacher absenteeism should be reduced to a minimum**.

   Teacher absenteeism is frequent in some schools and it lowers the learning achievement of pupils. The young pupils need their teachers daily to guide them through the learning process. Where a teacher has to be absent, such as in cases of sickness, a substitute teacher should be availed.

10. **As a long-term strategy, basic education should be extended to Form Five.**

    The study showed that the more educated the parents are, the better the learning achievement of the pupils. Today's children are tomorrow's parents. Furthermore, a technologically oriented society needs a population with sound basic education. The end of Form Five is a suitable stopping point for the whole population while university education continues to be the stage at which professionals are trained.

11. **Analyses of errors made by pupils should be carried out**.

    In the case of Life Skills, Numeracy, and the multiple-choice components of the two Literacy tests, item analysis will reveal the misconceptions of the pupils. What the children wrote in the open-ended items of the Literacy tests will likewise bring out the kind of mistakes the pupils made. This information should be disseminated to the teachers so that they can assess whether those mistakes or misconceptions are arising out of the way they taught the children or whether it is the children who are not getting the lessons right. The information should help them to devise teaching approaches that will help to reduce the kind of mistakes hindering the pupils from scoring high marks.

12. **The pupils in the sample of this study should be assessed again in Standard Six**.

    If teachers are giving effective remediation lessons as they reported, rank ordering by the time the pupils reach Standard Six should not remain the same. These test scores should correlate little with a Standard Six test, partly because maturation may result in differential learning and also because remediation may enable the pupils who are at the bottom in the study to gain some ground while some of the pupils who have performed very well may go down in their performance.

    The names of the pupils have been captured in the database. Though some of them may transfer to other schools before completing primary education, it would be expected that most of them would be in their current schools by the time they reach Standard Six.

13. **Abuse of pupils should be investigated**.

    Though it is not reported as rampant, any occurrence of pupil abuse detracts the child from learning and may permanently damage him/her. Further, should other children get to know that a classmate of theirs was abused, they may get scared, thereby affecting their participation in school activities. A study focusing on pupil abuse would be able to bring out information needed for action.

14. **A study focusing on the instructional practices of the teachers should be carried out.**

    This study did not observe the instructional processes. It is considered that a lot of the variance observed in the performance of the pupils could be explained by the interaction between teachers and pupils, both in and out of class. Classroom observations would bring out important aspects of what actually goes on in the classrooms. These can be supplemented with observational studies on how the teachers handle children out of class, such as during extra-curricula activities. Although observational studies are reputed for their unreliability, they are still vital in bringing out the qualitative aspects of a learning situation.

15. **Efforts should be intensified to make electricity reach all schools**.

    Most modern equipment and appliances use electrical power and therefore schools without electricity would not benefit from the use of such equipment and appliances. Schools in areas not yet reached with electrical services should be given generators.

16. **More computers and photocopiers should be availed to schools**.

    With 98% of households without computers, the only place where children could be exposed to computers is in the schools. There should be at least seven computers in every school. This is a minimum whereby teachers can focus on introducing pupils

to the machines. It is in this way that the objective of being current in the technological world can be realised. Botswana is a fairly technologically oriented developing country. The more the children learn to interact with the computers, the easier it will be for them to learn more of it later on in life. Every school should be supplied with a photocopying machine.

17. **The number of readers available in schools should be increased**.

Parents may not easily increase the number of books in the homes or become library members. The school remains the main place where the pupils should develop a reading culture. The more they read, the more they learn. This will not only help the pupils to improve on their achievement, but they may carry this spirit to the outside world and begin to make use of libraries around them. Graded readers which allow independent reading at a range of ability levels should be made available to all schools.

Appendix I

Primary Education Inspectoral Areas

Region Names					
West	**North**	**Central North**	**Central South**	**South**	**South Central**
Gantsi	Francistown	Tutume East	Palapye South	Kanye South	Gaborone south
Ngami	North East	Tutume West	Palapye North	Kanye Central	Gaborone North
Okavango	North East West	Boteti	Serowe South	Kgalagadi North	Gaborone West
Maun	Kasane	Tonota	Serowe North	Kgalagadi South	Kgatleng East
		Selibe Phikwe	Mahalapye East	Jwaneng	Kgatleng West
			Mahalapye West	Moshupa	Kweneng Central
			Bobirwa	Lobatse	Kweneng West
				Goodhope	Kweneng South East
					Kweneng North
					South East

Appendix II

Distribution of Pupils by Regions According to the Languages They Reported They Speak at Home

Home Languages	Region Name						Total
	West	South	Central North	South Central	Central South	North	
AFRIKAANS	3	7	2				12
BANGALIE		1					1
BEMBA	2	1	1	1	1		6
CHICHEWA						1	1
CHINA						1	1
ENGLISH	13	15	6	2	4	6	46
ENGLISH / SETSWANA	1	1					2
GERMAN		1					1
HERERO	1					2	3
HINTHE	1						1
IKALANGA	5	15	296	21	21	152	510
NDEBELE						31	31
NETETO	1						1
SENGWAKETSE	2	100	2	1	1		106
POLISH	1						1
SEBIRWA	1	2	42	1	101	2	149
SEBMOKOYO	1						1
SEHERERO	57	3	6	2	1	1	70
SEKALAKA	4	15	152	3	2	76	252
SEKGALAGADI	104	85	1	96			286
SEKGATLA	2	34	9	17	7	3	72
SEKGOTHU	2						2
SEKHURUTSHE			1	1		1	3
SEKOBA			2				2
SEKWENA		7	3	22	1		33
SELETE		1		2	3		6
SEMBUKUSHU	33					2	35
SENAJWA	2						2
SENGA		1			1		2
SENGOLOGA	50	20	1				71
SENGWATO	1	25	18	4	49	7	104
SEPEDI		1	1		1		3

SEROLONG	2	12	1		1	5	21
SEROTSI					1		1
SESARWA	24	2	16				42
SESHAGA		1					1
SESHONA		1	1				2
SESOBEA	1				1	43	45
SESOTO		1					1
SETALAOTLE			1				1
SETAWANA	2	1	4			1	8
SETLHWARE		3					3
SETLOKWA		2		1			3
SETSWANA	269	443	371	1426	749	265	3524
SETSWAPONG		2	27	2	112	1	144
SEYEI	61		1	1			63
SEZAMBIA				1		1	2
SEZEZURU			5		1	1	7
SEZULU						1	1
SWAHILI	3					1	4
TONGA		1					1
ZUMBI						1	1
Total	646	798	824	1606	1057	529	5460

Appendix III

Table 58: Distribution of Schools by Founding Years

Founding Years	Frequency	Percent	Cumulative Percent
1944	1	1.7	1.7
1946	1	1.7	3.3
1947	1	1.7	5.0
1950	2	3.3	8.3
1953	1	1.7	10.0
1955	1	1.7	11.7
1957	1	1.7	13.3
1958	1	1.7	15.0
1959	2	3.3	18.3
1960	1	1.7	20.0
1963	2	3.3	23.3
1964	1	1.7	25.0
1967	2	3.3	28.3
1968	2	3.3	31.7
1969	1	1.7	33.3
1970	3	5.0	38.3
1973	1	1.7	40.0
1975	1	1.7	41.7
1977	2	3.3	45.0
1978	2	3.3	48.3
1979	3	5.0	53.3
1980	4	6.7	60.0
1981	2	3.3	63.3
1982	3	5.0	68.3
1983	3	5.0	73.3
1984	1	1.7	75.0
1986	1	1.7	76.7
1987	3	5.0	81.7
1989	2	3.3	85.0
1990	2	3.3	88.3
1991	2	3.3	91.7
1992	1	1.7	93.3
1993	1	1.7	95.0
1994	2	3.3	98.3
1995	1	1.7	100.0
Total	60	100.0	

Appendix IV

Frequency Distribution of the Literacy in Setswana Total Score

Scores	Frequency	Percent	Cumulative Percent
1	1	.0	.0
2	1	.0	.0
3	5	.1	.1
4	8	.1	.3
5	9	.2	.4
6	22	.4	.8
7	30	.6	1.4
8	34	.6	2.0
9	55	1.0	3.0
10	67	1.2	4.3
11	87	1.6	5.9
12	97	1.8	7.7
13	102	1.9	9.6
14	113	2.1	11.7
15	104	1.9	13.6
16	136	2.5	16.1
17	155	2.9	18.9
18	173	3.2	22.1
19	169	3.1	25.3
20	171	3.2	28.4
21	208	3.8	32.3
22	211	3.9	36.2
23	190	3.5	39.7
24	206	3.8	43.5
25	212	3.9	47.4
26	225	4.2	51.5
27	234	4.3	55.9
28	247	4.6	60.4
29	214	4.0	64.4
30	221	4.1	68.4
31	234	4.3	72.8
32	201	3.7	76.5
33	212	3.9	80.4
34	189	3.5	83.9
35	180	3.3	87.2

36	163	3.0	90.2
37	126	2.3	92.5
38	101	1.9	94.4
39	90	1.7	96.1
40	70	1.3	97.4
41	56	1.0	98.4
42	43	.8	99.2
43	23	.4	99.6
44	10	.2	99.8
45	10	.2	100.0
46	1	.0	100.0
Total	5416	100.0	

Appendix V

Frequency Distribution of Literacy in English Total Scores

Scores	Frequency	Percent	Cumulative Percent
1	2	.0	.0
2	3	.1	.1
3	6	.1	.2
4	26	.5	.7
5	40	.7	1.4
6	70	1.3	2.7
7	129	2.3	5.0
8	171	3.1	8.1
9	263	4.8	12.9
10	311	5.6	18.5
11	414	7.5	26.0
12	450	8.1	34.1
13	521	9.4	43.5
14	549	9.9	53.5
15	503	9.1	62.6
16	471	8.5	71.1
17	384	7.0	78.1
18	318	5.8	83.8
19	238	4.3	88.1
20	167	3.0	91.1
21	156	2.8	94.0
22	104	1.9	95.9
23	70	1.3	97.1
24	50	.9	98.0
25	29	.5	98.6
26	31	.6	99.1
27	23	.4	99.5
28	16	.3	99.8
29	6	.1	99.9
30	4	.1	100.0
Total	5525	100.0	

Appendix VI

Frequency Distribution of Numeracy Total Scores

Scores	Frequency	Percent	Cumulative Percent
2	3	.1	.1
3	14	.3	.3
4	26	.5	.8
5	44	.8	1.6
6	123	2.2	3.8
7	130	2.3	6.1
8	192	3.5	9.6
9	234	4.2	13.8
10	295	5.3	19.2
11	360	6.5	25.7
12	402	7.3	32.9
13	482	8.7	41.6
14	505	9.1	50.8
15	532	9.6	60.4
16	548	9.9	70.3
17	469	8.5	78.8
18	404	7.3	86.1
19	306	5.5	91.6
20	188	3.4	95.0
21	149	2.7	97.7
22	80	1.4	99.1
23	32	.6	99.7
24	12	.2	99.9
25	4	.1	100.0
26	1	.0	100.0
Total	5535	100.0	

Appendix VII

Frequency Distribution of the Life Skills Total Scores

Scores	Frequency	Percent	Cumulative Percent
2	2	.0	.0
3	2	.0	.1
4	2	.0	.1
5	15	.3	.4
6	37	.7	1.0
7	67	1.2	2.2
8	116	2.1	4.3
9	140	2.5	6.8
10	165	3.0	9.8
11	192	3.5	13.3
12	217	3.9	17.2
13	287	5.2	22.3
14	308	5.5	27.9
15	366	6.6	34.4
16	430	7.7	42.2
17	498	9.0	51.1
18	502	9.0	60.1
19	515	9.3	69.4
20	462	8.3	77.7
21	390	7.0	84.7
22	357	6.4	91.1
23	194	3.5	94.6
24	151	2.7	97.3
25	91	1.6	99.0
26	41	.7	99.7
27	14	.3	100.0
28	2	.0	100.0
Total	5563	100.0	

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