

4. Chapter Four: Methodology

This chapter describes in detail the aims and objectives of this study mentioned in the introduction. Moreover, it discusses the region in which the study is carried out and provides the necessary educational statistics of the region. It justifies the methodology used to conduct the research in order to make the statistical jargon clear. It goes into the selection of tests and questionnaires, as well as the methods of analysing the data. The administrative procedure is discussed and the relevant levels of significance will also be set here. Finally, it gives the delimitation of the study.

4.1 Statement of the Problem

The provision of textbooks and other teaching materials such as supplementary readers has been and still is a major obstacle in the teaching learning process in Africa. It is both the production of good textbooks and making them available to students that pose problems. In a seminar on the future of indigenous publishing held in Arusha Tanzania, one of the major recommendations reads:

The rehabilitation of education in Africa, which implies first and foremost the provision of books and the training of teachers, is the only viable strategy for development, as other countries, notably in Southeast Asia, have shown. Therefore, industries that are related to educational development, in particular book publishing and book distribution, as well as the development and stocking of libraries, deserve to be prioritised as strategic industries. As such they should be given all the resources necessary to enable them to play their important role in preparing Africa's children for a secure and dignified future. (Hamrell and Nordberg, 1997:93)

Researchers point out that, although huge resources of language for learners have been used with increasing interest and theoretical awareness, some readers are so bad that they could harm the interest of the students. Hill (1997:78) argues:

It will be clear from the above that, in my view at least, not all the 1,621 graded readers currently in print are equally good. While some approach the excellent, others are so poor as to damage the reputation of the medium and harm the interests of learners. It is essential, therefore, that teachers who are building up libraries or class sets of graded readers should read the books themselves and pay attention to the feedback they get from their students... .

It is obvious that if Ethiopian students are to be successful in their education, they will have to do much academic reading for which they need adequate reading skills. At present, there is said to be a "... growing realisation of the decline of quality of the Ethiopian education system" (Tekeste, 1996:60). The provision of supplementary readers is to be used as a means of improving reading skills in the ESDP. Therefore, it is imperative to monitor and evaluate whether or not the provision of readers will produce the required skills. Foreseeing any pitfalls that might arise due to national or local realities would enable educational planners to make the necessary adjustments ahead of time.

Therefore, to prevent a decline and hopefully improve the quality of education in Ethiopia, students will have to be able to read effectively. The provision of supplementary readers to schools was intended to improve the reading skills of the students. Nevertheless, no serious efforts are being made to check that the students are, in fact, improving in their reading abilities. Some non-government organisations are already investing considerable sums in the production and provision of supplementary readers. The provision of books is the sole aim of CODE Ethiopia. Similarly, new civil society groups, such as Writers for Ethiopian Children, are being set up in an attempt to produce

culturally appropriate reading material. Government is also bound to move along this path, as it is so committed in the ESDP.

4.2 Aims and Objectives of the Study

This study will investigate if the provision of supplementary readers has brought about any significant improvement in the reading skills of students in government schools. Krashen in his comparative study (1993:84) strongly recommends extensive reading for students because, “they can continue to improve in their second language, without classes, without study and even without people to converse with.” If this holds true for Ethiopia, then increased efforts must be made to provide all schools with sets of supplementary readers. If not, then as one of the poorest countries in the world, Ethiopia will have to consider additional factors in education to those expounded by developed countries. Perhaps poor students spend their time out of school earning their living on the streets and do not have the time or place to sit down and study. Or perhaps the costs of replacing lost or damaged books prevent the students from actually using their books owing to fear of damaging or losing them. Because most books are comparatively expensive, the society might value oral traditions and oracy more than literacy.

Gessesse (1999:33) states:

In a country like Ethiopia where the literacy rate is very low, and where reading materials such as newspapers, books, magazines and the like are scarce; more generally in a country where there is hardly any culture of reading, the adverse impact of socio-cultural factors on the development of students’ reading ability is great.

This research will attempt to come up with three major findings:

- what the effect of the provision of readers has been on the reading skills of students in the past.
- what sort of utilisation capacity government owned primary schools in Addis Ababa have to use supplementary readers in English.
- implications for the effective utilisation of supplementary readers recommended in the Education Sector Development Program.

The hypothesis to be proved or disproved can be stated in the following manner:

Hypothesis One: The provision of supplementary readers to primary schools has produced a statistically significant improvement in the reading skills of the students.

Null Hypothesis: There is no significant relationship between the reading skills of the students and the provision of supplementary readers.

4.3 Research Methodology

The mixed-methodology design takes a researcher away from the well-known and familiar landmarks in traditional research and consequently has raised many queries.

Creswell (1994:189) states:

Mixing methods from qualitative and quantitative traditions has contributed to discussions about their value, especially because they raise the question of the operative paradigm being used. Whether paradigms should be linked with methods had led to different schools of thinking. Mixing methods has also raised a methodological issue as to whether the other “design” components of a study should follow one paradigm approach or the other.

Nevertheless, the researcher has dared to use this unfamiliar research design because the experiential and cultural insights of the schools, teachers and students that an expatriate researcher cannot bring to such a study can only be exploited through a qualitative design. Yet, the subjectivity of getting too close to the subjects and being biased can only be minimised by a quantitative approach. Therefore, those sceptical of the mixed-methodology are requested to withhold judgement until the end of the thesis, where the merits and demerits of such a design could be justified or criticised. With this as a backdrop, the methods used are discussed.

4.3.1. Instruments

The basic research instrument selected for collecting quantitative data was a standardised international reading test for general proficiency drawn up by the Edinburgh Project on Extensive Reading (EPER) of the Institute of Applied Language Studies of the University of Edinburgh. This test is recommended as a standard measure of general proficiency in reading and is used as a placement test to decide the reading level of learners. The test is basically a cloze test where a series of twelve reading passages are arranged in order of increasing difficulty. Each passage has from ten to thirteen words deleted and the students have to read the passage and fill in the missing words. Discussing the cloze test, Urquhart and Weir (1998:157) state that the underlying process in such a task is largely bottom up and emphasises careful passive decoding and local comprehension at the microlinguistic level.

The total number of items is 141 and the duration of the test is 60 minutes. On the first page, clear instructions about the test are given. There is also an example of a passage

with five words missing and then the answers are given. A wrong answer is also explained in that the students are required to fill the blank spaces with only one word and the wrong answer is composed of two words, so although it makes sense it is wrong. The actual test is not included in the appendix for security reasons.

Both the reliability and validity of the test have been proven internationally. The only possible shortcoming could be that the test and its content may not fit into the schema of Ethiopian students, so it had to be validated in the Ethiopian setting. To ensure that this test did not have any incompatibility with the Ethiopian situation, a small pilot test was run with 12 Grade Eight students from the Sandford English Community School. The following results were scored by the students.

Table 4: Scores on the EPER Placement Test by Sandford School Students

Name	Sex	Score/141	Standard Score	Reading Level
1	M	104	59	A
2	F	95	50	B
3	F	95	50	B
4	F	92	47	B
5	M	84	40	C
6	M	83	39	C
7	F	83	39	C
8	M	80	37	C
9	M	74	32	D
10	M	73	32	D
11		60	25	D
12		63	26	D
MEAN		82.1666		
MEDIAN		83		
MODE		95		

Furthermore, because all the above students were in the same grade, the test was also administered to seven other students from various schools and grade levels selected by convenience sampling to ensure that the test distinguishes grade level. The students scored the following results;

Table 5: Results of Students Involved in Test Reliability

Student	Sex	Score/141	Std Score	Level	Grade	School
A	F	124	84	R	10	Nazareth
B	F	101	55	A	10	Hope Ent.
C	M	39	14	F	8	Hope Ent.
D	F	102	56	A	7	Danddi Boru
E	F	25	8	G	3	Nazareth
F	F	100	54	B	11	Hiwot Berhan
G	M	93	48	B	8	Dandii Boru

As can be seen from these results, the EPER test is capable of drawing out the range of reading abilities of the students. The reading ability of the students ranged from reading unsimplified materials in the case of the grade 10 student down to reading simple sentences as in the case of the grade 3 student. The scale is capable of successfully distinguishing the reading levels of the various students. Consequently, the test was deemed as suitable to apply on Ethiopian students.

Qualitative data was gathered through questionnaires, observations and discussions. The questionnaire (see Appendix 3) was given to teachers and librarians in the target schools. Although respondent bias is said to have proven a major factor in previous studies such as ERGESE (Tekeste,1990:18-22), it was decided that this could be minimised by having

counter-checking questions and casual observation at the schools. It has twelve items designed to glean a certain piece of relevant information. The first two questions see if teachers and librarians consider the variety and quantity of readers in their respective schools adequate. The third asks their opinion about whether they think using supplementary readers assists the students in mastering English. Questions four and five ask them what percentage of their students use supplementary readers outside class and what percentage of them are good readers. Questions six to nine are designed to gather information about the library and ask about the convenience of opening hours, the existence of a conducive environment, and whether or not teachers and librarians assist the students in selecting appropriate titles. Question ten asks if the teachers incorporate supplementary readers into the regular classroom. Questions eleven and twelve see how familiar the teachers and librarians are with the supplementary readers by asking them to choose the top two and the bottom two in terms of their appropriateness for Grade Eight students.

The researcher sat in a few reading lessons to get a feel of each school. Informal visits were made to the four libraries and informal talks were held with the teachers. These were recorded by unstructured note-taking. Moreover, teachers and librarians and selected students were given some issues to discuss, to gather their general perception of the pros and cons of the teaching of reading in their schools. The students were given these questions in Amharic to make them feel at ease in a language they are familiar with (see Appendix 4).

4.3.2 Administration Procedure

Two sections of approximately 60 students each were taken from Entoto Amba and Medhanealem junior secondary schools and considered as the ‘treated’ group as these schools were involved in the Primary Readers Scheme pilot project. As explained in Chapter Two, the Primary Reader Scheme involved two schools in Addis Ababa city state in the pilot project of 1996 to see if the provision of supplementary readers would benefit students. The students were made to sit the tests in May 2001 to ensure that they had benefited from as much of the instruction in Grade Eight as possible. The sections were selected at random in the case of Medhanealem, as all Grade Eight Sections were free in the morning and classes were available. In the case of Entoto Amba, however, no classes were available so the teachers agreed to give the test in the regular English period. As the English period lasts for 40 minutes and the test lasts for 60 minutes, 20 minutes were used from the students’ break-time. Therefore sections had to be chosen on their availability and the fact that their English periods fell before break-time.

From the sections at Entoto Amba, 8B and 8C were the sections chosen and given the test. On the day of the exam there was a total of 129 students in both sections. Two regular teachers invigilated the test.

As all four sections in Medhanealem had classes in the afternoon shift, two sections were selected at random and requested to come one morning to sit the test. As the students were taking the 8 grade national examination, they were more than willing to sit for the test as they saw it as an opportunity to be exposed to an English test which would further

prepare them for the exam. The construction of a new block of classes solved the problem of space and once again two regular teachers invigilated the test. However, on the day of actually administering the test at Medhanealem, the researcher was informed that volunteers had been taken from all sections of the school.

The ‘untreated’ group was taken from the other government schools, which are similar to Entoto Amba and Medhanealem junior secondary schools regarding ownership, textbooks and curriculum, students’ socio-economic background and even the availability or lack of an adjoining senior secondary school to minimise confounding factors. Both Entoto Amba and Kebena cater for students in grades 1-8, while Medhanealem and Kokebe Tsibah have an adjoining senior secondary school, where their students can continue up to grade 12.

Like Entoto Amba, two sections from Kokebe Tsibah were given their tests during regular classes. The sections were chosen because their English periods fell before break-time and could consequently borrow 20 minutes from the break. On the day of the exam there was a total of 125 students in both sections. The English Department Head teachers invigilated the test.

As at Medhanealem, the students from Kebena had to take the test outside their regular shift. However, because there were only ten classrooms, the students had to come in on a Saturday to take it. Since there were only two sections in Grade Eight, the question of

selection did not arise. The English Department Head invigilated the test. But only 78 students turned up on the day of the test.

After all the students had sat the EPER placement test and the scores were analysed, additional information was sought from selected teachers and students through interviews, classroom observations and focus group discussions.

4.3.3 Scoring

The placement test comes with a complete test pack including notes for users, answer sheets, marking key and score guide. The answer sheets were marked by a research assistant using the key and were then double-checked by the researcher. The reading levels are divided into ten (see Scores Guide in Appendix 5 and letter of permission to use the EPER test in Appendix 6). The highest level consists of native-like reading proficiency where the reader can read any kind of unsimplified material. The next highest, called Level X, also consists of native-like proficiency but describes the ability to read unsimplified teenage fiction. The next seven levels are labelled from A to G consecutively. These refer to reading skills of non-natives, whereby A and B refer to very high reading skills, enabling the reader to read unsimplified teenage fiction all the way down to the first stages in a reader programme. Below G is what has been called level S in this study, and students at this level can only read starter and reading cards, as they have probably just been exposed to phonics or the alphabet. If one were to rate these reading levels with the grades in the Ethiopian Education system, then the following could probably be expected:

Table 6: **EPER Level Approximate Equivalency with Ethiopian Grades**

EPER Level	Approximate Equivalency with Ethiopian Grades
Level S / Starter Cards and Reading Cards	Kindergarten and Grade 1
Level G	Grade 2
Level F	Grades 3 & 4
Level E	Grades 5 & 6
Level D	Grades 7 & 8
Level C	Grade 9
Level B	Grade 10
Level A	Grades 11 & 12
Level X	Freshman
Level R	Second Year and above

As discussed in Chapter Three, grade eight students may have reading abilities that would normally range between grades 4 – 12 in their reading ability and could be expected to fall within the corresponding levels of A to F.

After the tests were marked, the results of both groups were scrutinised, using measures of central tendency, the EPER score guide and a non-directional t-test of differences. There was a slight difference in the overall number of students in the treated group and the ‘untreated’ group. This was disregarded, as Brown (1988:124) states that only a marked difference in sample sizes of 3:1 or more will affect the results.

4.3.4 Analysis Tools

Regarding the descriptive statistics, measures of central tendency used were the mean, median, mode, and standard deviation. For the inferential statistics Best and Kahn (1999:327) specifically mention the t-test and ANOVA as robust tests that are usually appropriate, even if a few assumptions of parametric test are violated. If there is a difference between the means of the treated and untreated group, its significance will be assessed using a t-test. Theoretically, the provision of the readers could have affected the students in two ways. They could have either provided motivation and opportunity for the students to read more and thus improve their reading skills, or their difficulty could have caused such a disagreeable experience that the students gave up on reading and their reading skills actually deteriorated. To accommodate for both these possible effects on the students' reading skills, the type of t-test used is a non-directional or two-tailed test of significance. This plots out the students' scores on a curve and has a 2.5% rejection area on either end of the curve to allow both for an improvement in or a deterioration of the students' reading skills. The t-test involves the calculation of the difference by comparing the actual differences in the means with the possible differences that could have occurred through unrelated factors. This is known as the ratio between the experimental variance and the error variance.

4.3.4.1 Level of Significance

There were more than 120 students, so the degree of freedom was infinity. Therefore, if one were to apply the rigorous measure of 0.01 the critical values of student's distribution

(t) would be significant at 2.576. However, the less rigorous measure of 0.05 is usually applied in social sciences, in which case t would be significant at 1.960.

4.3.4.2. Questionnaire Analysis

The questionnaires were analysed in a more qualitative manner. The researcher held several discussions with the teachers and librarians and also made notes on his various visits to the school about general conditions. The feedback from the librarians and the teachers was noted. Then their responses in the questionnaires were triangulated both with the students' results and with observations and notes made by the researcher. The fact that the researcher speaks the same language and comes from the same culture as the subjects, as well as having spent a decade in teacher training which included supervision of teaching at this level, gives him useful insights that would not be available to external researchers.

4.4 Delimitations

This study is limited to four of the sixty-three government schools that go up to Grade Eight. In fact, it covers 100% of the schools involved in the pilot project of the Primary Reader Scheme in Addis Ababa, as only Entoto Amba and Medhanealem were involved, while the remaining three schools were from Oromia region. Consequently, only two similar schools could be involved in the control group. Nevertheless, as there are many students in each school, the number of students involved in the study was high. The total number of students involved was 454 with 251 of these belonging to the treated group and

208 to the control group. Numerically, this was approximately 50% of all students in the schools involved in the Primary reader scheme.

In terms of reading, it focussed on the microlinguistic level of syntactic and lexical knowledge and proficiency. It basically ignored important aspects like background knowledge, inference skills and enjoyment derived from extensive reading, due to the unsatisfactory instruments for measuring and describing these aspects.

To conclude, Chapter Four has discussed the methodology and given an in-depth analysis of which methods have been chosen and why they have chosen. It also justifies the choice of the EPER test and has proved that it is both reliable and valid in the Ethiopian context. Chapter Five continues with the results of the study.