

**EMPIRICAL EXAMINATION AND ADAPTATION OF THE IMAGING TECHNIQUE AS A
SUPPORT IN DEVELOPING READING COMPREHENSION SKILLS OF TOWNSHIP
SECONDARY SCHOOL LEARNERS**

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EMPIRICAL EXAMINATION AND ADAPTATION OF THE IMAGING TECHNIQUE AS A SUPPORT IN DEVELOPING READING COMPREHENSION SKILLS OF SECONDARY SCHOOL LEARNERS

3.1 INTRODUCTION

The development of reading comprehension skills of secondary school learners is crucial in promoting the overall learning at school. Most learners from the historically disadvantaged environment experience problems in reading comprehension and the use of English as a language of learning and teaching. Lack of English programmes for the development of English language and reading comprehension skills in township secondary schools puts learners in a disadvantaged position.

The main purpose of this research is to examine how should the imaging technique be adapted as a learning support in the development of the reading comprehension skills of township secondary school learners. The extrinsic barriers obstructing the mastery of the imaging technique will be investigated in order to adapt the technique for optimum use in developing the reading comprehension skills of township secondary school learners. The nature of difficulties experienced by the researcher during the implementation of the imaging technique will be examined as representing extrinsic barriers to learning which confronted these learners. The secondary aim of this study is to use the imaging technique effectively as a support in developing township secondary school learners' reading comprehension skills, thereby to improve the learning of other subjects. The research will expectedly bring to light to what extent poor literacy development, the disadvantaged environment, the use of English as the language of learning and teaching, and language comprehension difficulties impact on the mastery of the imaging technique by township secondary schools for the development of their reading comprehension skills.

The long-term aim of the research is to use this imaging technique effectively as a support in mainstream township secondary schools in order to develop the reading comprehension skills of the learners and to improve their overall learning and performance.

3.2 RESEARCH PLAN

3.2.1 Introduction

No research looking at the use of the imaging technique as a support in developing reading comprehension skills of township secondary school learners in South Africa has been found. Empirical design research will be used in the implementation of the imaging technique. Prof Erik De Korte from the University of Leuven in Belgium pointed out in 2001 during a lecture at the University of Pretoria that empirical design research is of value in trying to seek solutions to problems experienced by learners in developing countries. The empirical design research model has been selected so that the researcher may be able to study the barriers obstructing township secondary school learners in mastering the imaging technique and examine in a practical way how to adapt this technique in order to enhance reading comprehension of the particular group of learners.

This research study is mainly qualitative in nature, seeking to analyse and understand the process taking place in each session. Wiersma (1991:32) holds the view that in qualitative research, the researcher attempts to explain the phenomenon under study, including the variance, through description of logical interpretation of what has been observed. According to Bryman (2001:20), qualitative research is concerned with the generation rather than the testing of theories. The reflections on each session will be analysed qualitatively. Wiersma (1991:85) maintains that qualitative data analysis requires organization of information and data reduction.

The data of this research suggest categories for characterizing information as learner factors, facilitator's role, the timing of sessions, the learners' intellectual ability and their familiarity/unfamiliarity with reading. Hence the description of the process the reflection and the interpretation of each session will take these categories into account.

A quantitative comparison of pre-test and post-test data will also be made, seeking to analyse and understand items of success and failure in the learners' performance. The data will be analysed to the learners' age, number of years in the high school, place of dwelling, home language and parental involvement during the participation of the learners in the research.

3.2.2 Participants

(1) The sample

Wiersma (1991:248) explains that in random selection, the individuals are randomly selected as representing a population. In random assignment, commonly used in experiments, the

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individuals are randomly assigned to different groups or treatments. Borg and Gall (1989:644) maintain that random assignment is the best technique available for assuming initial equivalence between different groups. The research was conducted with Grade 9 learners. The participants initially comprised 60 learners. A pre-test in English reading comprehension (Refer Appendix A) was administered to all of Grade 9. The 60 learners who obtained the lowest scores (which ranged between 2.5% and 37.5%) were systematically and randomly assigned to an experimental, control and non-treatment group. Each group contained 20 learners. During the course of the research attrition occurred where five learners in the experimental and control groups dropped out of the reading support or went out of school altogether leaving 15 in each group, and 5 learners from the non-treatment group also left the school. Table 3.1 contains a description of the sample before attrition.

Table 3.1 Sample Distribution according to Pre-test Scores before attrition*

Scores	%	Experimental Group	Control Group	Non-Treatment Group
/40	%			
1	2.5		L1	
2	5	L1		L1
3	7.5	L2		L2
4	10	L3	L2, Ca	L3
5	12.5	L4, L5, L6		NTa
6	15	L7, Ea	L3, L4, Cb, Cc	L4, L5, L6
7	17.5	L8, Eb	L5, L6, L7,	L7,L8, NTb
8	20	L9, L10, L11 Ec, Ed	L8, L9,	L9, L10, NTc, NTd
9	22.5	L12, L13, Ee	L10, L11, Cd, Ce	L11, L12, NTe
10	25	L14	L12	L13, L14
11	27.5			
12	30		L13, L14	
13	32.5			
14	35		L15	
15	37.5	L15		L15
Mean		6.9 (17.3%)	8.0 (20.0%)	7.3 (18.3%)

* Learners who dropped out of the reading support are numbered Ea, Eb...Ca, Cb...NTa, NTb...

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Table 3.1 contains the sample distribution according to pre-test scores before attrition. The random assignment of learners in the experimental group was uneven. The experimental group has 3 learners who obtained scores of 2, 3 and 4 while the control group has 2 learners with a score of 4. The non-treatment group was more comparable with the experimental group. There are 3 learners with a score of 5 in the experimental group and 1 learner in the non-treatment group while the control group has none. The assignment of learners with scores of 7-9 is more comparable in all the three groups. The experimental group has 2 learners with scores between 10-15, the control group has 4 learners and the non-treatment group has 3 learners. Thus the uneven assignment of learners especially in the experimental group indicates that this group contains weaker learners as compared with the other two groups. During the analyses of the post-test results this factor will be taken into consideration. All learners assigned in the three groups experienced difficulty with reading comprehension, decoding, lack of English vocabulary and the use as well as the understanding of English as the language of learning and teaching. Some learners had failed Grade 8 and Grade 9 once or twice and even thrice and others were doing Grade 9 for the first time. All three groups contained learners who came from the township and from informal settlements. The learners were from the following language groups: Zulu, Tsonga, Southern Ndebele, Swazi and Northern Ndebele.

Table 3.2 contains a description of learners who finally participated in the research, in terms of possibly relevant characteristics.

Table 3.2 Summary Group Description Pre-test and Post-test following attrition

		Experimental Group		Control Group		Non-Treatment Group	
		Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
No of Learners		15	14	15	15	15	10
Gender	Boys	5	5	7	7	11	7
	Girls	10	9	8	8	4	3
Home	Township	12	12	9	9	9	4
	Informal Settlement	3	2	6	6	6	6
Years in Secondary School	2	1	1	2	2	3	1
	3	10	10	11	11	6	5
	4	4	3	2	2	6	4
Age	13	1	1				
	14	1	1			2	1
	15	4	4	5	5	2	1
	16	4	4	3	3	2	2
	17	4	3	5	5	3	2
	18	1	1	2	2	5	3
	19					1	1
Home Language	Main African Language	3	3	2	2	7	6
	Minority African Language	12	11	13	13	8	4
Learners absent from post-test			1		0		5

Each group contained 15 learners following the attrition.

Table 3.2 shows that the E group has fewer boys (5) while the C has more boys (7) and the NT groups has the most boys (11) each. There are more girls (10) in the E group the C group has less girls (8) and the NT group has least girls (4). The E group contains more learners (12) from the township in comparison with the C and NT group that have fewer learners (9). The E group has fewer learners (3) from the informal settlement than the C and NT group have more learners (6) each. There is only 1 learner who has never repeated Grade 8 or 9 in the E group, 2 learners in the C group and 3 learners in the NT group. The C group has more learners (11) who repeated once in the secondary school followed by the E group (10) and the NT group (6). The NT group has most learners (6) who repeated twice in the secondary school, while the E group has less (4) and the C group has least (2). The NT group has more overage learners (11) when compared with the C group (10) and the E group (9). The E group and the NT groups have 2

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learners each who are under age while there is none in the C group. The NT group has more learners (7) from the main African language spoken in the school (Sepedi) followed by the E group (3) and the C group (2). The C group contains more learners (13) from the minority language group, that is, Tsonga, the E group has less (12) and the NT group has least (8).

Table 3.3 (a) shows the learner identification of the experimental group. The experimental group contains 3 learners with scores between 2-4, 5 learners with scores between 5-7, 5 learners with scores between 8-9 and 2 learners with scores between 10-15. The table shows the learners' date of birth, age on 01/06/2001, gender, years in secondary school, home and their language group. There are 5 boys and 10 girls. This group has 10 learners who repeated a grade once in the secondary school, 4 learners who repeated twice and 1 learner who has never repeated a grade in the secondary school. There are three learners from the informal settlement and 10 learners from the township.

Table 3.3 (b) shows the learner identification of the control group. The control group contains 2 learners with scores between 1-4, 5 learners with scores between 6-7, 4 learners with scores between 8-9 and 4 learners with scores between 10-14. There are 7 boys and 8 girls. This group has 2 learners who have never repeated, 11 learners who repeated once and 2 learners who repeated twice. There are 9 learners from the township and 6 learners from the informal settlement. There are 2 learners from the main African language group and 13 learners from the minority language group.

Table 3.3 (c) shows the learner identification of the non-treatment group. The non-treatment group contains 3 learners with scores between 2-4, 5 learners with scores between 6-7, 4 learners with scores between 8-9 and 3 learners with scores between 10-15. There are 11 boys and 4 girls. There are 3 learners who have never repeated, 6 learners who repeated once and 6 learners who repeated twice. There are 7 learners from the main African language and 8 learners from the minority language.

The control group consisted of 15 learners after the attrition. The assignment of learners to the research groups was uneven. The control group had more learners who obtained higher scores in the pre-test as compared with the experimental group and non-treatment group. The control group contained only 2 learners with a score of 4 while the experimental and the non-treatment groups each had 1 learner with a score of 4. The control group had no learner with a score of 5 yet the experimental group had 3 learners and the non-treatment group had 1 learner. The assignment of learners with scores between 8-9 was relatively even in all the three groups. The

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control group contained 3 learners with scores between 12-14 while the experimental and the non-treatment group had only 1 learner with a score of 15. Thus the interpretation of the post-test results will be seen against this background.

Table 3.3 (a) Learner Identification: Experimental Group

Learners	Pre-test Scores		Date of birth	Age on 2001/06/01	Gender	Years in Secondary School	Home	Lang.
	/40	%						
L1	2	5	82/11/07	18yrs 6ms	Girl	3	Township	Main African language
L2	3	7.5	85/01/28	16yrs.4ms	Boy	3	Informal Settlement	Minority language
L3	4	10	85/09/22	15yrs 7ms	Girl	4	Township	Minority language
L4	5	12.5	83/06/26	17yrs 11ms	Girl	4	Informal Settlement	Minority language
L5	5	12.5	85/7/05	16yrs.om	Boy	3	Township	Main African language
L6	5	12.5	84/09/27	16yrs.8ms	Boy	3	Township	Minority language
L7	6	15	85/11/11	15yrs 6ms	Girl	3	Township	Minority language
L8	7	17.5	85/06/28	15yrs 11ms	Boy	3	Township	Minority language
L9	8	20	83/11/01	17yrs 7ms	Girl	4	Informal Settlement	Minority language
L10	8	20	82/06/27	18yrs 11ms	Boy	4	Township	Main African language
L11	8	20	84/10/24	16yrs 7ms	Girl	3	Township	Minority language
L12	9	22.5	87/08/28	13yrs 9ms	Girl	2	Township	Minority language
L13	9	22.5	86/12/25	14yrs 5ms	Girl	3	Township	Minority language
L14	10	25	86/03/13	15yrs 2ms	Girl	3	Township	Minority language
L15	15	37.5	83/05/23	17yrs.11ms	Girl	3	Township	Minority language

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Table 3.3 (b) Learner Identification: Control Group

Learners	Pre-test Scores		Date of birth	Age on 2001/06/01	Gender	Years in Secondary School	Home	Lang.
	/40	%						
L1	1	2.5	83/09/01	17yrs.ms	Boy	3	Township	Main African language
L2	4	10	86/11/12	14yrs.6ms	Boy	3	Township	Minority language
L3	6	15	85/07/22	16yrs.1m	Girl	3	Township	Minority language
L4	6	15	82/04/08	19yrs.2ms	Girl	3	Township	Main African language
L5	7	17.5	83/04/30	18yrs.1m	Boy	4	Township	Minority language
L6	7	17.5	85/03/15	16yrs.2ms	Girl	3	Township	Minority language
L7	7	17.5	85/04/22	16.1m	Boy	3	Informal Settlement	Minority language
L8	8	20	84/06/16	16yrs.11	Boy	3	Informal Settlement	Minority language
L9	8	20	86/06/24	15yrs.1m	Girl	2	Township	Minority language
L10	9	22.5	84/05/08	16yrs.11ms	Boy	3	Informal Settlement	Minority language
L11	9	22.5	84/06/16	16yrs.1ms	Girl	4	Township	Minority language
L12	10	25	85/11/11	15yrs.6ms	Boy	2	Informal Settlement	Main African language
L13	12	30	86/09/10	14yrs.8ms	Girl	3	Informal Settlement	Minority language
L14	12	30	85/05/14	15yrs.11ms	Girl	3	Township	Minority language
L15	14	35	84/11/15	16yrs.7ms	Girl	3	Informal Settlement	Minority language

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Table 3.3 (c) Learner Identification: Non- Treatment Group

Learners	Pre-test Scores		Date of birth	Age on 2001/06/01	Gender	Years in Secondary School	Home	Lang.
	/40	%						
L1	2	5	83/05/22	18yrs.0m	Boy	3	Township	Minority language
L2	3	7.5	83/10/31	17yrs.7ms	Girl	4	Informal Settlement	Main African language
L3	4	10	83/07/05	18yrs.0m	Boy	3	Township	Minority language
L4	6	15	83/01/05	18yrs.4ms	Boy	4	Township	Minority language
L5	6	15	83/02/27	18yrs.3ms	Boy	3	Informal Settlement	Minority language
L6	6	15	86/12/08/	14yrs.5ms	Girl	2	Informal Settlement	Minority language
L7	7	17.5	86/09/19	14yrs.8ms	Boy	2	Township	Minority language
L8	7	17.5	84/04/05	17yrs.1m	Boy	4	Township	Minority language
L9	8	20	85/08/22	15yrs.9ms	Girl	3	Township	Main African language
L10	8	20	84/06/30	16yrs.11ms	Boy	4	Township	Main African language
L11	9	22.5	81/08/14	19yrs.9ms	Boy	4	Informal Settlement	Main African language
L12	9	22.5	86/07/24	15yrs.0m	Boy	2	Informal Settlement	Minority language
L13	10	25	83/03/06	18yrs.2ms	Boy	3	Informal Settlement	Main African language
L14	10	25	85/03/01	16yrs.2ms	Girl	3	Township	Main African language
L15	15	37.5	84/02/02	17yrs.3ms	Boy	4	Township	Main African language

(2) Research activities with research groups

(a) Experimental Group

The experimental group used the imaging technique. Each session began with relaxation exercises. This was followed by verbal narrative where learners were guided on how to use the imaging technique. Discussions of mental pictures formed during the process of imaging were conducted and learners were encouraged to use their mother tongue. Printed text was

introduced gradually, beginning with one word, a sentence, a paragraph and the whole text. Learners were guided on how to transfer the process of imaging used during the verbal narrative to reading text. The imaging technique was also used in the learning of subjects like Physical Science and Biology. By means of drawings and comprehension questions learners were assessed to determine their understanding. After every session reflection was done to enable the researcher to adapt the imaging technique where learners experienced problems. The detailed analysis in 3.3.2 will focus on the experimental group, followed by brief description of the control group support sessions in 3.3.3.

The following steps were implemented:

- * Creating a conducive and trust worthy learning atmosphere.
- * Indicate to learners that they need to concentrate, be attentive, focus and listen carefully.
- * Give learners an opportunity to exercise imaging by giving them one word before proceeding to full sentences.
- * Encourage learners to draw their imaged pictures on narratives and text.

(b) Control Group

The control group used a different method in the development of reading comprehension skills, but the same text and the same comprehension tests as the experimental group. The researcher used the dictionary method where difficult vocabulary words were explained in order to enhance the understanding of the text. Discussions with learners were held where the researcher determined the nature of problems learners experienced during each session. The use of mother tongue during the discussions was encouraged.

(c) Non-treatment Group

The non-treatment group was not involved in any form of reading comprehension support, but only wrote the pre-test and post-test.

3.2.3 Qualitative analysis of sessions with experimental group: Formative Assessment

According to Jacobs, Haasbroek and Theron (1992:47), formative assessment indicates an internal assessment programme that is usually undertaken as part of the development process where the performance of learners in the programme is compared with the aim of the programme.

During the implementation of the imaging technique the participation of learners and their difficulties with the reading material used were observed and recorded. The relaxation exercises used as an introduction to imaging were closely observed. Learners experiencing problems in forming images were assisted. Formative assessment developed gradually from the learners' processing of one word, to one sentence, two sentences a paragraph and finally to full text. Questions and discussions were conducted in order to assess the learners' understanding and their ability and skill in using the imaging technique when reading. The researcher was also monitored closely to ensure credibility and reliable interpretation. There were continual discussions with the supervisor who controlled the researcher's personal emotional involvement so that it should not influence the findings.

Formative assessment took place in the manner described below with regard to the following aspects of each session:

(1) Relaxation exercises

Each session began with the relaxation exercises to help learners to be relaxed, and to allow free flow of the mind while forming mental pictures. They also helped learners to willingly stay focused, to be attentive, take initiative and be creative. The assessment of the relaxation exercises was done through observation and asking questions while the researcher was moving around listening as well as assisting learners who appeared tense and feeling uneasy.

(2) Verbal narrative descriptions

The presentation of the reading text was heralded by a verbal narrative. The verbal narrative was used to enhance the mastery of the imaging technique. Learners seemed more comfortable in processing verbal information than written information.

Guided imaging was first introduced by means of a short verbal narrative in order to stimulate the learners' attention, concentration and interest in developing the mastery of the imaging technique. The learners were guided on how to process incoming information cognitively and effectively by forming pictures in their mind. Formative assessment was done by means of observation, drawing of pictures (Refer Appendix B) and discussion with the learners. Learners who experienced difficulty in mastering the imaging technique were presented with an alternative short verbal narrative which was simpler and within their experiential world.

Formative assessment assisted the researcher in gaining insight in the learners' understanding, involvement, participation, difficulties and frustration they were displaying during the process of imaging.

(3) Presentation of reading material and use of narratives

After the presentation of the verbal narrative learners were given a word card and instructed to form picture(s) in their mind about that particular word (Refer to Appendix C). Once learners had mastered the formation of pictures to written words, the researcher presented them with a sentence. Both the cognitive and affective dimensions of the process were used. By means of observation, drawings and discussions the researcher was able to assess how learners assimilated the new information from the written text and their prior knowledge during the process of imaging. The procedure was later also applied for full text.

(4) Group participation

Borg and Gall (1989:391) hold the view that the participant observer, by virtue of being actively involved in the situation being observed, often gains insights and develops interpersonal relationships that are virtually impossible to achieve through any other method. During the imaging process, after being instructed to form mental pictures about what they had read, learners were told to discuss the pictures and to verify whether their pictures correlated with the text they had read. The researcher moved around listening and observing the participation of each individual learner in the group and also helping where learners had difficulty.

(5) Informal discussions

The formative assessment focussed mainly on two matters:

(a) Language: To establish the level of their understanding and the problems experienced especially with the use of English as the language of learning and teaching. Most learners found it difficult to express themselves in English during the discussions. The researcher allowed them to use their mother tongue to discuss the English reading text and the researcher moved around listening and observing. Learners indicated that they felt more comfortable when they were using their mother tongue for discussion.

(b) Affect: During the discussions the researcher also looked at the learners' emotional feelings such as their likes or dislikes, frustration and interest during the process of imaging. The discussions were used as a reflection after each session to help the researcher to adapt

the technique in such a way that the problems experienced in a session would be overcome in the next session and reading comprehension could be developed and enhanced.

3.2.4 Interview with learners

Interview with learners was held at the end of the reading support. Learners were selected according to their post-test results. Learners whose improvement scores were high, average and low were selected from each group. Open and semi-structured questions were used during the interview to gather information on how they experienced the reading support. The non-treatment group was interviewed about their experience on the pre-test and the post-test.

3.2.5 Quantitative analysis: Summative assessment

The reading comprehension test (Refer to Appendix A) that was used as the pre-test was also used as the post-test. The pre-test results provided the baseline information for the summative assessment. The pre-test and the post-test results were compared to analyse significant improvement or not in the development of reading comprehension skills of township secondary school learners through the use of the imaging technique. Always bearing in mind the type of reading material used in the test, a break-down of the items was done in terms of whether questions were difficult, moderate and easy in order to examine for the difference in the performance of each group. All groups including the non-treatment group were assessed on the reading comprehension test.

3.2.6 Triangulation

In its original and literal sense, triangulation is a technique of physical measurement. Cohen and Manion (1995:233) define triangulation as a research step as the use of two or more methods of data collection in the study of some aspects of human behaviour. They further highlight that by analogy, triangulation techniques in the social sciences attempt to map out or explain more fully, the richness and complexity of human behaviour by studying it from more than one vantage point and, in so doing, by making use of both quantitative and qualitative data. By means of pre-test and post-test comparisons the researcher is able better to interpret the qualitative data of the learners' performance and vice versa. The data collected during the imaging sessions where learners answered comprehension questions on the imaged text, (Refer to Appendix D) also informed on the learners' ongoing performance.

The researcher collected the qualitative data by means of observations, discussions and drawings. The methods which the researcher used in adapting the imaging technique are also forms of triangulation.

3.2.7 Ethical Aspects

Borg and Gall (1989:84) indicate that in planning a study, the investigator or researcher has a responsibility for its ethical acceptability. Prior to this research study the researcher explained the general aim of the research to the principal, parents of learners to be involved, learners in the research groups and Grade 8 and Grade 9 English educators (including the multi-disciplinary panel). By means of a written letter parents of learners to be involved in the research were requested to confirm that they permitted their children to participate (Refer to Appendix E). The learners were assured that all the information gathered during the research would be treated confidentially. The names of the learners involved would not be disclosed and the integrity of all the learners would be protected. Feedback on the findings would be provided to all relevant persons as soon as they were available.

3.3 RESULTS AND FINDINGS

3.3.1 Orientation

The research will be reported on in two sections, the first looking at the process (the reading support sessions and the interviews with three learners, and the second looking at the reading comprehension performance results).

3.3.2 Practical implementation and examination of adaptation of the imaging technique as a support in developing reading comprehension

(1) Introduction

The practical implementation of the imaging technique consisted of twenty sessions. The imaging technique was implemented with the experimental group. Each session took one hour, from 14:00 to 15:00 on Mondays and Wednesdays. Each session began with relaxation exercises with an aim of putting learners at ease and to feel relaxed before they commenced on the imaging for reading. The use of the senses was emphasized in order to help the learners to concretize spoken or written information. After the relaxation exercises the researcher demonstrated how to use the imaging technique.

Learners were usually divided into groups of twos at first and then into groups of threes or fours. Learners were also encouraged to use their mother tongue to discuss their pictures or

images. The researcher walked around observing the participation of the learners and also recording their contributions, difficulties and their experiences of imaging. Each session was concluded with a reflection in order to find out the successes and the difficulties encountered in order to plan for the next session. Each session is reported in terms of (a) objectives (b) preparation, (c) process of imaging and (d) reflection.

(2) Session One (2001-05-23) (Refer Appendix F for the content details of the sessions)

- (a) Objective: To introduce the use of the imaging technique.
- (b) Preparation: Word cards and verbal narratives.
- (c) Process of imaging: (Attendance: 20) The session began with relaxation exercises, systematically addressing various body parts. The importance of relaxation was emphasized in order to help L¹ to relax so that they could enhance the free flow of the mind which is crucial in the creation of mental pictures. Concentration, paying attention and being focused was stressed. Not all Ls succeeded in relaxing. Ls 1, 4 and 6 folded their arms in spite of the instruction to let them hang loosely and L 7 seemed tense and watched the researcher (R) intently. There was also a fairly constant hum of Ls asking one another curiously what this could be about.

Ls were next told to close their eyes and R did the first verbal narrative in English, instructing them to form a mental picture as it proceeded. All were quiet and the majority appeared to follow the narrative, but Ls 1, 4, 5 and 6 appeared to simply sit with their eyes closed expressionlessly, as if not attempting to visualize the content of the narrative.

Ls were told to open their eyes and a full group discussion was held about the pictures they had formed in their minds. The discussion was started in English and Ls 3, 8, 11 and 15 tried (and succeeded in fairly simple factual form) to describe their pictures in English. Upon being given an opportunity to speak N. Sotho² (that is commonly used in the research school when learners from different language groups are in one group) also participated, and their content was markedly more detailed and graphic than the contributions in English, even describing some feelings. In addition to the four Ls who had not appeared to visualize the narrative, a further three (Ls 2, 10 and 14) were also unable to describe what they had seen.

¹ Learner L, Learners Ls, Researcher R.

² Most Ls were Tsonga speaking, but discussions other than English were conducted in N. Sotho (Sepedi).

Because of the difficulties observed, R explained the technique of forming mental pictures to Ls and gave an example. Then the second narrative description was given. This narrative was adapted on the spot by emphasizing the sensory qualities of the experience (e.g. the heat of the day and the coldness of the drink), to integrate affective elements of experience into the images, in this way to support their understanding and the process of imaging.

A discussion was then held between Ls in twos and R moved around, listening. This time, Ls talked mainly in their home languages i.e. Tsonga, Zulu and N. Sotho. Most facts were covered and enriched with feelings. Ls appeared more confident, even Ls 5 and 6 who had been expressionless during the first narrative. However, Ls 1 and 4³ made no progress on imaging. R was satisfied that all excepting L1 and 4 now understood how to image. Participation was lively and the general atmosphere was positive, cheerful and proud. As homework Ls were instructed to draw⁴ their images of the narrative.

(d) Reflection

Attendance: The attendance was good since it was the first day.

Learners: Ls were able to concentrate, pay attention to be focused during the process of imaging. Verbal narratives helped them in the mastery of the imaging technique. Ls were able to follow verbal descriptions in English (i.e. their language of learning and teaching). This technique awakened enthusiasm, a new way of learning; it integrated cognitive and affective meaning for them. Some Ls had difficulty in forming mental pictures and/or difficulty in understanding explanation in English; these needed examples.

Most Ls were able to draw holistic pictures (Refer to Appendix B) about the verbal narrative. The pictures showed that Ls generally understood how to use imaging. The first drawing of L 14 is the best picture, which indicated that L 14 understood the verbal narrative during the process of imaging. The picture shows L 14 walking alone on a hot sunny day when someone/ friend came and offered her a cold drink. The footsteps and clothing on the picture indicate that she correctly processed the verbal narrative.

The second drawing, of L 11, is less detailed with information, but L 11 was still able to image the verbal narrative correctly.

³ Ls 1 and 4 displayed severe difficulty mastering skills throughout the learning support. As it will be contemplated in the final discussion of results, there is a strong possibility that intellectual disability and not language and reading difficulty was the cause of their overall low performance in all the school subjects.

⁴ See App. B for sample of Ls' drawings. Discussion on Ls' drawings will form part of the reflection on the relevant session.

The third drawing, of L 10, is the least detailed with information. This indicates that though L 10 was able to image, he left some gaps of information on the drawing. The information is correct but not rich like the drawing of L 14.

Interpretation: The technique of imaging to verbal narratives seems appropriate and feasible for township secondary school learners in Grade 9, even when conducted through the medium of English. R was sensitive to Ls' needs and understanding hence the adaptation of the technique on the spot in order to enhance its mastery. The performance of Ls and their response to imaging was very encouraging to R. R and Ls ended the session on a good note and all are looking forward to the next session where imaging for reading is going to be introduced.

Next session: To introduce the imaging technique in a reading activity.

(3) Session Two (2001-05-28)

- (a) Objective: To introduce the imaging technique in a reading activity.
- (b) Preparation: Verbal narrative, word card and copies of reading text. (What happened to Jack).
- (c) Process of imaging: (Attendance: 20) The principles of imaging e.g. concentration, relaxation, paying attention, being focused and processing information with conscious use of the senses were emphasized. The session began with relaxation exercises in order to put Ls at ease and processing information with conscious use of the senses. Ls cooperated very well during the relaxation exercises and followed the instructions in English adequately.

R showed the word "attractive". R asked if Ls knew the meaning of the word. Ls responded positively. R instructed Ls to picture something that was attractive. The appearance, colour, size of that particular object had to be added in their mental picture.

Ls indicated that they were able to form pictures about the word "attractive".

Ls were instructed to close their eyes and R gave a verbal narrative. At the end of the narrative Ls were instructed to open their eyes. R instructed Ls to discuss their mental pictures in twos while R was moving around listening. Ls 3, 6 and 15 were trying to communicate in English while the rest used their mother tongue. Most Ls understood the narrative and the discussion of mental pictures was correct and relevant. Ls 1 and 4 also tried to contribute in their discussions but had not yet mastered imaging.

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After the verbal narrative, R guided Ls on how to transfer the use of imaging into the reading of a text. A short paragraph was read aloud by R, who guided Ls on how to form mental pictures while reading. R stopped the demonstration and asked Ls if they understood what they were supposed to do when reading. Ls generally agreed that they understood how to use imaging for reading, but some didn't respond, although nobody asked specifically for further clarification.

R now gave Ls copies of the same text (What happened to Jack?) Learners were instructed to read aloud in twos taking turns for each following sentence, while the other would follow on his/her text. R observed that Ls 6, 9, 13, and 14 struggled to read aloud. Ls 2, 3, 5, 7, 8, 12 and 15 read aloud fairly well while Ls 1 and 4 could hardly read aloud at all. Poor decoding where some Ls read word by word led to inability to make sense of the text and to form mental pictures in their minds. Ls took a long time to finish the text.

R instructed Ls to discuss the passage with each other and the mental pictures they had formed while reading. Only Ls 3 and 15 were able to discuss the content and their information was relevant but not rich in details. All other Ls were quiet and could not discuss either the passage or their mental pictures. Here Ls read aloud without understanding and could not form pictures.

(d) Reflection

Attendance: The full attendance suggests feelings of confidence, security and interest in the research group after their first experience on imaging.

Learners: Ls were able to use imaging when R gave the verbal narrative. Their participation was positive and facial expressions showed that they followed the description of the narrative during the imaging process. However, Ls 1 and 4 experienced severe problems with reading aloud as well as understanding of the text. Inability to read obstructed the Ls' ability to form mental pictures and to construct meaning about the text. Ls who read aloud fairly well still failed to form mental pictures and to construct meaning of the text, suggest that they read without understanding, hence they could not discuss the text or mental images even when encouraged to use their mother tongue. This indicates that decoding alone does not lead to meaningful reading hence learners failed to discuss what they had read. Ls were demotivated, discouraged and lost interest as some were just looking at the passage and making no effort to read. Their inability to read may be ascribed to unfamiliarity with reading and difficult words they encountered.

Interpretation: The use of the imaging technique with verbal narrative was simple for most of the Ls except for Ls 1 and 4. When the reading text was introduced the inability to read aloud with understanding hampered the formation of mental pictures and the construction of meaning about the text. Ls 3 and 15 had little difficulty with reading aloud and understanding, hence

imaging was much better with them. But Ls who struggled to read aloud and also with understanding had difficulty in forming mental pictures and comprehension of the text. These Ls lost interest, and stopped reading. The session ended on a low note.

Next session: To guide Ls step-by-step on how to master the imaging technique for reading using the same text. The same text will be read since learners are now familiar with it. R felt it would be easier to help learners to learn how to use imaging with that same text in order to enhance reading comprehension skills.

(4) Session Three (2001-06-04)

- (a) Objective: To guide Ls step by step on how to master the imaging technique for reading and to enhance reading skills.
- (b) Preparation: Copies of reading text (What happened to Jack?)
- (c) Process of imaging: (Attendance: 14) The session began with relaxation exercises. Ls seemed to be able to relax and enjoyed the exercises.

R gave Ls copies of the reading text done in the previous session. The same text was used since Ls were familiar with the content even though they could not understand it properly. R thought it would be easier to show them how to use imaging with that text. Ls were divided into groups of threes. Ls were instructed to read the passage aloud sentence by sentence and to form a mental picture about that particular sentence. Ls read each sentence taking turns. Ls 2, 5, 6 and 13 read poorly, reading word by word and struggling with pronunciation. Ls 3, 11, 12, 14 and 15 read fairly well. Ls 7, Ea, Eb, Ec and Ed⁵ had difficulty with decoding of certain words and L1 again could not read.

During the reading R walked around helping Ls with pronunciation and the meaning of difficult words. Ls then had to read the sentences again to make sense of what they were reading. After completing the first paragraph R instructed Ls to read the paragraph again since they were now familiar with it and to image about each sentence until the whole picture on the paragraph had been formed. The reading was now much better and Ls could follow what the text was all about.

R stopped Ls after the first paragraph and asked a few questions about the text. Most Ls gave correct answers and R was convinced that they had now understood the paragraph. Ls were instructed to continue to the second paragraph while imaging and R walked around assisting

⁵ Ls who dropped out of the research group are numbered Ea ,Eb Ec, Ed and Ee.

with pronunciation, which was the reason for most difficulty. Ls read to the end of the passage. At the end of each paragraph R asked a few questions to assess their understanding. R also asked Ls to check whether their imaged pictures correlated with the information in the text. This helped Ls to reconstruct their mental pictures and meaning they had formed about the text.

R instructed Ls to discuss their mental pictures on the text as a whole. R moved around listening and observed that the Ls' discussion was much better. Their understanding of the text was better and they communicated more positively about the text and their mental pictures.

After the discussion R instructed Ls to draw their mental pictures in their groups so that they could help one another in filling in information that might be missing. Refer Appendix B to the drawings that were done.

(d) Reflection

Attendance: The poor attendance of Ls on this day may be attributed to difficulty in reading experienced by Ls in the previous session.

Learners: Ls were quiet, focused and attentive. They found it easier to relax. When the reading of text was introduced. Ls were guided on how to use imaging reading sentence by sentence. Questions asked by R at the end of each paragraph helped learners in the building of mental pictures and enhanced their understanding. Assistance with pronunciation also helped learners to read aloud correctly and with understanding. Ls gradually gained confidence after reading the first paragraph for the second time and continued to other paragraphs fairly well. Their discussion was more meaningful and relevant. Participation had improved and Ls were more positive than in the previous session when the same text was read. The drawing of mental pictures was good and Ls helped one another.

Interpretation: The use of the imaging technique for reading is difficult at first. The adaptation of imaging where Ls read sentence by sentence and the questions asked by R enabled Ls to understand and to form mental pictures much better. The use of the imaging technique with Ls experiencing reading difficulty demands sensitivity and creativity on the part of R. Close observation of Ls' feelings, difficulties and participation helped R to adapt the technique in order to enhance reading comprehension.

The implementation of the imaging technique was tedious and R at first felt that there would be no improvement. Innovative ability is the key to success as far as the implementation of this technique is concerned.

Next session: To instil reading skills and the mastery of the imaging technique.

(4) Session Four (2001-06-06)

- (a) Objective: To stimulate the interest in reading and to demonstrate how to read for meaning and the use of imaging when reading.
- (b) Preparation: Copies of reading text (Palesa's beautiful dress).
- (c) Process of imaging: (Attendance: 14) Discussion about difficulties of reading aloud experienced in the previous session. The discussion concentrated on pronunciation, phrasing, intonation and the expression of meaning when reading. The discussion aimed at stimulating Ls on the joy of reading and also equipping them with reading skills.

Relaxation exercises were done and Ls were at ease.

R gave each learner a copy of the reading text. Ls were instructed to be quiet and to listen attentively as R read the passage to them, following on their copies and forming mental pictures. R read expressing meaning, phrasing, with correct intonation, to demonstrate how to read appropriately, pronounce words correctly and observe punctuation marks. R instructed Ls to image while reading.

Ls listened with interest and enthusiasm while imaging as R read the whole passage. R asked Ls questions on the content of the text after reading. Most learners gave correct answers and this indicated that they understood the passage. During the questioning time Ls showed feelings of sadness and happiness as reflected by the text and said they were looking forward to see how the story would end.

After the discussion of the passage with Ls, R instructed the learners to individually draw the mental pictures they had formed while R was reading. Ls were requested to draw any scene they liked most from the story and to use their creativity.

(d) Reflection

Attendance: The attendance was not so good, perhaps due to the difficulty experienced in the previous session and the fact that the sessions are conducted after school. Most learners stayed far away from school.

Learners: Ls were happy, quiet and attentive during the reading of the passage. Ls showed feelings of sadness and happiness in accordance with the passage. The reading of the passage by R stimulated the interest in reading in Ls and also supported the development of expressive reading skills. Ls enjoyed answering verbal comprehension questions. Though some learners answered poorly, the majority of learners had no problem in comprehension of the passage. The drawings of mental pictures were fascinating. Ls whose answers were poor also drew good

drawings that showed that they did use imaging appropriately and understood the text (Refer to Appendix B). The drawings indicated that Ls were able to cognitively and affectively process the text while imaging. Imaging is apparently easier when Ls are not reading.

Interpretation: Imaging seems easier if reading aloud is not required. Imaging did help in enhancing memory and the concretisation of the text. Inability to read aloud correctly with skills such as decoding, correct pronunciation, phrasing and intonation negatively affected imaging for the comprehension of the text. For imaging to take place with Ls with reading comprehension problems, development of reading interest, skills and familiarity with reading are all necessary. Adaptation of the imaging technique in a listening activity did yield positive results. This seems to indicate that the imaging technique has potential in developing reading comprehension skills but adaptation is necessary. R felt encouraged when Ls were able to use imaging after the text was read to them.

Next session: To emphasize the use of cognitive and affective processes as during imaging.

(6) Session Five (2001-06-11)

(a) Objective: To guide learners on the use of cognitive and affective processes when imaging. To guide learners on how to break through to meaning of unfamiliar words.

(b) Preparation: Copies of reading text (The end of winter).

(c) Process of imaging: (Attendance 16) Ls were divided into the groups of twos and threes. The session began with relaxation exercises to help Ls eliminate, tension and tiredness since they had come directly from attending classes. Ls 1, 10, Eb, Ec and 14 were urged to come to the reading session and the relaxation exercises helped them also to be more relaxed, and positive and to participate meaningfully during the reading session.

R then handed out copies of the reading text. R instructed Ls to read the first paragraph aloud in their groups taking turns per sentence while imaging. R walked around listening and observing their participation. Ls 1, 4, 9 Eb, Ec, 10 and 13 still struggled with pronunciation of certain words while Ls 2, 3, 5, 6, 8, 11, 12, 14 and 15 read fairly well, though not expressing meaning in certain portions. R helped with the pronunciation and meaning of words. After completing the first paragraph, R asked Ls verbal comprehension questions to assess their understanding. Ls were able to answer the questions fairly well. Ls 1 and 4 made some progress in reading aloud, though not very much.

The asking of questions by R assisted Ls in reviewing the paragraph they had read and they were able to recall the text. It also assisted them in checking with their mental pictures, if they were in accordance with the text. The discussion of mental pictures in the groups indicated that

learners were progressing well on imaging. The cognitive and affective content was processed accordingly and learners managed to share their feelings of cold and sympathy for the boy in the story.

R instructed Ls to continue to the second paragraph, still reading sentence by sentence while imaging. R guided Ls on how to construct meaning out of text while imaging, in order to break through to the new meaning of words they didn't understand. R also stressed that Ls need not know the meaning of all words before they could understand the text, but only the words critical to imaging and such words R explained so that Ls could see how to break through on their own. The holistic view of the passage was emphasized so that Ls should not see the text as consisting of "parts" (words) but of full statements in order to construct meaning.

Ls read fairly well, improving gradually. Some Ls assisted others with pronunciation. Some Ls still read word by word and this made others impatient and annoyed. R encouraged the struggling Ls to try their best and told the better readers to be sympathetic of those who were struggling so that they may also gain confidence. R created a good learning atmosphere so that everybody would feel comfortable with reading even if he/she made mistakes.

Ls shared their understanding of the second paragraph and the imaged pictures. Discussion of mental pictures helped Ls who had difficulty with imaging such as L1 and 4. The discussions started in English and switched to the home languages once R observed that Ls got stuck. In this session, most Ls succeeded fairly well in using imaging while reading.

(d) Reflection

Attendance: Absence from the session was due to being absent from school.

Learners: Difficulty with reading aloud is still experienced by some Ls. The adaptation of the technique where Ls were assisted with pronunciation and the meaning of words did enhance imaging. Oral questions asked after a paragraph was read also helped with understanding of the text. Ls did not succeed in breaking through to the meaning of difficult words when reading. Ls are apparently becoming familiar with reading, but the development of the reading habit is progressing slowly since Ls are not doing any extra reading on their own.

Interpretation: The use of the imaging technique with reading needs adaptation time and again when progress is not achieved. R needs to be observant and sensitive to Ls' difficulties and problems with reading. Encouragement of poor readers and the creation of a conducive learning atmosphere seemed to give poor readers confidence to try even if they made mistakes. R is gaining confidence in assisting Ls and seeing some progress. The implementation of imaging

with Ls who experience a diversity of learning problems is challenging. Encouraging and motivating Ls is crucial during the process of imaging in order to inspire Ls such as Ls 1, 4, Ec, Ed, Ee, and 10 who have a history of failure, to experience success and see the value of acquiring reading skills.

Next session: To emphasize the use of imaging and to assess progress made in imaging in written comprehension questions.

(7) Session Six (2001-07-18)

(a) Objective: To enhance the mastery of the imaging technique and to assess the progress made in imaging in written comprehension questions.

(b) Preparation: Copies of reading text (The end of winter) and comprehension questions.

(c) Process of imaging: (Attendance: 14) R had a discussion with learners about how they felt about relaxation exercises. Ls indicated that they felt as if they were asleep and dreaming. R pointed out that this helped them to clear their minds from anything that might disturb them during imaging.

R gave Ls brief background information on the text read in the previous session, with an aim of assisting Ls to recall what was done in the previous session more than a month earlier. Questions focused on mental pictures about the text.

R handed out copies of the reading text. Ls were divided into groups of fours and were instructed to read from the first paragraphs, taking turns as per two sentences. R stressed that Ls should form mental pictures while reading.

Ls read fairly well since they were still familiar with the text. Some Ls 3, 5, 8, 11, 12, 13 and 15 were able to construct meaning on the new vocabulary using the information from the text. Ls 1, 2, 6, 7, 9, 10 and 14 still struggled with the construction of meaning of unfamiliar words.

R stopped Ls after reading the first three paragraphs and asked them a few verbal comprehension questions. Ls answered well. R instructed those Ls who had difficulty to repeat reading the second and the third paragraph. R guided Ls on how to perceive the text holistically and to use their background knowledge to construct meaning. The demonstration helped Ls to understand how to read for meaning even though they came across new words that were not critical to imaging in order to comprehend the passage generally.

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R instructed Ls to discuss their mental pictures and the text in their groups. R moved around listening to the discussion. The discussions were informative and Ls communicated with understanding using both English and their home language. Participation was also good since Ls who were struggling were accommodated and accepted by Ls who read better so that they could also learn to develop confidence.

R handed out comprehension questions and answer sheets. Ls answered the comprehension questions individually.

(d) Reflection

Attendance: Ls who were absent were Ls Ea, Eb, Ec, Ed, Ee and L 4. These Ls are irregular attendees and the winter holidays also negatively affected their attendance.

Learners: Ls' performance is progressing gradually. The discussion of mental pictures and the content of the text indicated that Ls are progressing in the mastery of the imaging technique while reading. However, the answers to the written comprehension questions indicated that Ls have difficulty with questions that need interpretation, reasoning and insight. The scores of most Ls were generally above average while L 1's score was 0 and L4 was absent.

Interpretation: The use of the imaging technique appears to enhance understanding and the formation of mental pictures, though poor reading still occurs in some Ls. Progress seems better since Ls are becoming familiar with reading yet this text was read for the second time in this session. The June holidays seem to have had a negative impact on the performance of Ls since no reading was done during the holidays.

R had to encourage and to motivate Ls to work during the session. Giving Ls the background information on the text and reminding them how they could use their prior knowledge assisted in the process of imaging. The demonstration on how Ls could break through to the meaning of new words also helped them in constructing meaning though not all of them succeeded well. The poor reading of some of the Ls has a negative impact on the interpretation of the comprehension questions.

Next session: To enhance the mastery of the imaging technique and to assist Ls how to construct meaning when reading.

(8) Session Seven (2001-07-23)

(a) Objective: To enhance the mastery of the imaging technique.

(b) Preparation: Verbal narrative and copies of reading text (The wreck of the Zanzibar).

(c) Process of imaging: (Attendance: 15) Ls responded positively to relaxation exercises. The R did a verbal narrative on a hot delicious soup (it was a very cold day), and R observed that Ls were processing the narrative very well. They could smell the soup and the hot bread rolls with butter. The discussion of the mental pictures by Ls was interesting. They even mentioned that the narrative aroused hunger in them. Ls 1 and 4 also progressed gradually in the process, especially when a narrative was given.

Ls were divided into groups of threes and fours. R handed out copies of the reading text. Ls were instructed to read two sentences each taking turns in their groups. R walked around listening and assisting Ls with pronunciation of unfamiliar words.

Reading progressed fairly well. Some Ls who struggled with pronunciation were assisted by their fellow Ls. Ls 5, 6, 7, 8 and 9 were showing improvement. L 2, 3, 11, 12, 13, 14 and 15 read better than the rest of the group. Ls 1, 4, Ec, read word by word with a lot of difficulty. Ls only read three paragraphs. After reading each paragraph, discussion of mental pictures was done.

R observed that the ability to read aloud had gradually improved with some Ls, though not yet adequately. Ls had difficulty with the meaning of the following words: bay, storm, stump, massive, gulls and turtle. By means of questions R showed Ls how to construct meaning out of the text. After explanation of the difficult words, except turtle, they were instructed to read the whole passage at home as homework and to draw a turtle. The aim of reading at home was to give Ls an opportunity to figure out what was a turtle.

(d) Reflection

Attendance: Some of the Ls are now seeing the importance of attending the reading session, hence they are usually present. Other Ls are usually absent from school and some Ls who struggle in class with all their schoolwork do not see the importance of attending.

Learners: Ls read aloud quite well, though they have difficulty with the meanings of new vocabulary. Inability to figure out the meaning of words has a negative impact on their imaging. Explanation of new words aids their understanding of the text. Ls indicated that they were not familiar with the text. The text was not related to their every day life situation. The drawing of the turtle indicated that Ls have no clue at all as to the meaning of the word turtle. Ls drew fishes while others drew crocodiles (Refer to appendix B).

Interpretation: If difficult words that are critical to imaging are not explained, they hamper imaging and comprehension. Once the text contains information not related to their background experiences, imaging is almost impossible. Adaptation of the technique such as the giving of the

meanings of critical words and giving the background information on the text does yield positive results on imaging.

Next session: Adaptation of the technique by giving meanings of words that are critical to imaging.

(9) Session Eight (2001-07-30)

(a) Objective: To enhance the mastery of the imaging technique by giving meaning of words that are critical to imaging.

(b) Preparation: Copies of reading text (The wreck of the Zanzibar).

(c) Process of imaging: (Attendance: 14) Relaxation exercises. A short discussion about the verbal narrative done in the previous session. Ls had no difficulty in recalling the information about the hot delicious soup. R told Ls that they were able to recall the information because they had managed to form mental pictures and to use their senses when processing the narrative. R divided Ls into groups of threes. Ls were instructed to have a discussion about the text done in the previous session. Ls kept quiet and could not discuss. R asked them a few questions that prompted them to discuss. Ls answered the questions poorly due to their lack of comprehension and not knowing what the turtle was. Ls could not break through to the meaning of the word turtle when reading the text as homework. Some of Ls 10, 13; and 14 indicated that they had not read the text.

R gave them the meaning of the word turtle. Ls were amazed to find that the turtle was not a crocodile or fish as they had drawn.

Ls were instructed to read the text, taking turns with two sentences each while imaging. After reading each paragraph a short discussion was held.

This time, the discussion of mental pictures and the text as a whole was more fruitful. Ls could picture the turtle lying on the beach after being washed out of the sea after the rain and storm. The discussion was mainly in their mother tongue. The participation of Ls was positive and they were happy to comprehend the text. Imaging was possible because the critical word (turtle) to imaging had been explained.

(d) Reflection

Attendance: Ls Ea, Eb, Ec, Ee, 1 and 4 were absent. Most are those who struggle with their learning in almost all the subjects. These are irregular school attendees.

Learners: The explanation of critical words to imaging markedly enhances the process of imaging. Reading aloud is still a problem to some Ls, notably those who are reluctant to read at home. Ls who read the text at home participated better during the discussion than those who did not.

Interpretation: The use of imaging for reading needs adaptation such as the use of the mother tongue, explanation of critical words, oral comprehension questions and motivation. The process of imaging for reading progressed better on this day. Ls began to experience a sense of achievement and confidence. R is happy about the progress made. It is encouraging to see Ls beginning to master the technique.

Next session: To enhance the mastery of the imaging technique by using self-questioning.

(10) Session Nine (2001-08-01)

- (a) Objective: To assist in the mastery of the imaging technique by using self-questioning.
- (b) Preparation: Copies of reading text (Roald Dahl)
- (c) Process of imaging: (Attendance: 14) R emphasized the importance of the use of the cognitive and affective processes when imaging. Relaxation exercises were done and Ls were calm and relaxed.

R demonstrated how Ls should use self-questioning in order to enhance the mastery of imaging.

R divided the Ls into groups of fours. Copies of reading text were handed out. R instructed Ls to read the first paragraph. One L had to read the first paragraph while others were following on their copies and imaging.

Ls read well generally without difficulty. R instructed them to read aloud the paragraph again while asking themselves questions on what was happening in order to form mental pictures. Then Ls read aloud the second paragraph once and stopped for discussion.

R observed that Ls understood the text and could form mental pictures of the boy who was standing by the window watching the snow falling outside. Self-questioning was used appropriately and did help Ls in the formation of mental pictures, which led to comprehension. R explained the words “flakes drifting” and “colour of steal”.

R instructed the Ls to continue reading up to the end of the fourth paragraph.

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Ls read with more meaning and enthusiasm. They were becoming more familiar with reading and the pronunciation of words was even better. Regular attendees were improving much faster than those who were sometimes absent. The discussion of the third and the fourth paragraph was easier. Ls could describe the scene in the text with feelings and interest. The session ended on a good note.

(d) Reflection

Attendance: Ls who attend sessions irregularly continue to pick up problems with reading aloud and imaging hence the absenteeism. Those who attend regularly are apparently improving.

Learners: Ls' reading ability is improving and also the process of imaging. The use of self-questions notably improves the mastery of imaging which enhances comprehension and memory of the text. The participation of Ls during the discussion is also improving. Ls discuss with more interest and enthusiasm. The discussion is becoming more informative. Ls 1, 4, 6 and 9 also contributed during the discussions.

Interpretation: The use of imaging is becoming more established in Ls. Adaptation of the technique by using self-questions does enhance the mastery of imaging. R feels more grateful as Ls progress in their mastery of imaging. Close observation of Ls' needs and difficulties has enabled R to adapt the technique effectively. Group work seems to enhance imaging.

Next session: To continue with the same text and the use of metacognitive skills by means of self-questions as a strategy of enhancing the mastery of the imaging technique.

(11) Session Ten (2001-08-03)

(a) Objective: To enhance the use of metacognitive skills by means of self-questions and further mastery of the imaging technique.

(b) Preparation: Reading text (Roald Dahl).

(c) Process of imaging: (Attendance: 15) Session began with relaxation exercises, which went well. Ls were quiet and cooperative.

R demonstrated further to Ls how to use self-questions when reading in order to enhance imaging. R emphasized that self-questions help in the connection of prior knowledge and the new incoming information in order to make sense of what one is reading. During this process the Ls' cognitive and affective processes are interacting with one another with an aim of assisting the Ls to construct meaning out of the text.

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Ls were then divided into groups of fours and fives. R handed out copies of the reading text. Ls were instructed to read a paragraph at a time while others follow in their copies. R moved around listening and observing the participation of Ls and how they interacted with the text.

Reading progressed very well with most Ls in the different groups. Words that were difficult to pronounce were done with the help of R. Most Ls tried their best to read the text with interpretation and observing the punctuation marks. Where Ls experienced problems in making sense of the text, R assisted them by asking a few questions e.g. "Can you picture the snow falling? How deep was the snow?" etc. R stressed that Ls should question themselves on the content of text in order to enhance imaging and comprehension.

After reading the first four paragraphs an open discussion was conducted. By means of questions R guided Ls on their discussion of their mental pictures and their comprehension of the text.

Ls' discussions were good and informative. They expressed their feelings and understanding of the text. Continuous guidance on the use of questions helped them to position themselves within the text and to concretise it with meaning. English and the mother tongue were used.

(d) Reflection

Attendance: Attendance is still fluctuating. Ls whose performance is progressing attend more regularly than those whose performance is progressing slowly.

Learners: Ls' imaging process seems to improve well with reading. Adaptation of the technique by means of self-questioning has helped Ls in the mastery of imaging. Ls who are progressing slowly are those who attend irregularly and this hampers their mastery of imaging. Helping Ls who were absent in the previous session is time consuming and wastes time of those who always attend.

Interpretation: The use of self-questioning does enhance the mastery of the imaging technique. Reading skills such as pronunciation and the observation of punctuation marks and the expression of textual meaning seem to be improving very well with most Ls, though some still lag behind due to absenteeism. The imaging technique seems good in group work because Ls who find it difficult to understand and to use the process of imaging usually learn from other Ls. Imaging also helps Ls to concentrate and position themselves within the text. Monitoring and motivation of Ls by R is very important in enhancing meaningful participation of Ls. R's observation is important in identifying Ls who struggle so that adaptations can be made. R needs to be creative and sensitive to Ls' needs during the process of imaging. Grouping Ls in

different groups has assisted R to know Ls better and to see how they work with different Ls.

Next session: Assessment of the development of reading comprehension skills.

(12) Session Eleven (2001-08-08)

(a) Objectives: To assess the development of reading comprehension skills through the use of the imaging technique.

(b) Preparation: Reading text (Roald Dahl) and comprehension questions.

(c) Process of imaging: (Attendance: 14) Relaxation exercises, Ls divided into groups of fours and fives. R handed out copies of reading text and instructed Ls to read the same text of the previous session paragraph by paragraph. Reading of the first part was a revision and Ls had to continue with the text since the passage was long.

Reading was adequate. R gave the meaning of the following words enormous, ravenously, desperate and trudging as they were critical to imaging.

A short overall discussion was done on the passage and R was happy that Ls showed signs of understanding the text. R handed out answer sheets and question papers. Ls were urged to use imaging when reading the questions.

(d) Reflection

Attendance: Attendance was 14. Five, Ls (Ea, Eb, Ec, Ed and Ee) have been absent for 4 consecutive sessions. L4 is also an irregular attendee.

Learners: Ls' performance on the comprehension questions is average to above average. L 1 again has a score of 0. She copied information from the text without understanding. This suggests that she did not understand the questions due to her inability to read with meaning. Most Ls had difficulty answering questions that challenged their cognition.

Interpretation: The use of the imaging technique needs patience and courage on the part of the R. Sometimes R thought that Ls were improving very well in previous sessions, but their performance in the comprehension questions is not as it was hoped. Problems experienced by Ls in the comprehension questions have to be identified in order to be addressed. Motivation and encouragement of Ls who generally perform poorly in class is difficult since these Ls do not experience success in most of their learning and they have already developed a negative self-concept.

Next session: To practice the use of metacognitive skills when imaging.

(13) **Session Twelve (2001-08-13)**

- (a) Objective: To practice the use of metacognitive skills when imaging.
- (b) Preparation: Reading text (Roald Dahl) continued.
- (c) Process of imaging: (Attendance: 15) Relaxation exercises. Ls were divided into groups of threes in order to enhance meaningful participation. R emphasized Ls' involvement, intentionally, the use of prior knowledge and use of metacognition during imaging.

R gave Ls copies of reading text and instructed them to read aloud per sentence while imaging. Self-questioning was stressed as one of the components that enhanced the use of metacognitive skills when reading. After reading a paragraph Ls had to stop and discuss the text and their mental pictures. Only three paragraphs were read.

Reading was still improving. R walked around during the discussion and listened to Ls' contributions. Where Ls had difficulty R asked them questions about the text. Ls indicated that they understood and the formation of mental pictures was improved. The asking of questions by R helped Ls to review their mental pictures and they were able to see whether they were relevant or not. During that process Ls were continuously using their prior knowledge and connecting it with the new written information while forming mental pictures.

(d) Reflection

Attendance: Some Ls are attending regularly. Ls 4 is sometimes absent and this hampers her improvement. Other Ls are absent due to family commitments where they have to fetch their younger brother or sister from the day care centre.

Learners: The participation of Ls was adequate. Ls are showing positive improvement in the quality of reading activities and their discussions. Involvement of L 2, 5, 6 and 14 during their participation was pleasing. This also encouraged Ls who are still struggling with reading aloud and the use of metacognitive skills when interacting with the text. Most Ls are trying their best to discuss in English though sometimes they use their mother tongue.

Interpretation: The use of metacognitive skills does enhance the mastery of imaging. Ls' use of prior knowledge added to the new written information from the text help in the formation of mental pictures and also improved comprehension. Questions asked by R assisted Ls in their formation of mental pictures. R is pleased that the mastery of imaging is progressing well with many Ls though progress is not on the same level with all Ls.

Next session: To use the process of imaging for the learning of other learning areas. Ls requested that they want to begin with Physical Science.

(14) Session Thirteen (2001-08-15)

- (a) Objective: To use the process of imaging for the learning of other learning areas. Flexible transfer of imaging to new topics.
- (b) Preparation: Text from Physical Science, a brick and a sponge.
- (c) Process of imaging: (Attendance: 13) Relaxation exercises to stimulate and put Ls at ease.

Activation of prior knowledge on pressure, force and area; R instructed Ls to form mental pictures on pressure and what happens when one exerts pressure on an object. Ls were guided on how to use imaging when visualizing a situation where pressure is exerted on a particular area of an object. Ls were having their eyes closed, visualizing the pressure that was exerted.

R demonstrated how pressure is exerted by using a brick and a piece of sponge. Different examples were given, e.g. standing and lying on the mattress bed. Ls read a brief passage on force and pressure. Ls were instructed to form mental pictures about how pressure is exerted. They were then instructed to draw their mental pictures. R showed Ls how pressure was calculated. Different examples were done in class where Ls did exercises on the calculation of pressure and unit of pressure was also given.

d) Reflection

Attendance: Ls 11 and 13 were ill and could not attend. L 10 Ea, Eb, Ec, and Ed were absent from school.

Learners: Ls' participation was adequate and showed interest and enthusiasm in their learning activities. Demonstration, activation of prior knowledge and examples given helped Ls to see how they could transfer the use of imaging to other subjects. Ls appeared fascinated about the use of the imaging technique when learning other subjects. This promotes involvement, concentration, attention and meaningful participation. Flexible transfer of imaging to another subject was done appropriately, though not up to the optimum level since Ls had to image on a small amount of work.

Interpretation: The use of the imaging technique for the learning of other subjects promoted meaningful participation of Ls and also promoted meaningful learning. Passive learning which Ls were used to did not seem to occur during the imaging process. Communication amongst Ls and with R was promoted. Language use in English was promoted as more vocabulary words were gained by Ls.

Next session: To enhance the understanding and learning of Biology through imaging.

(15) Session Fourteen (2001-08-20)

- (a) Objective: To enhance the understanding and learning of Biology through imaging.
- (b) Preparation: Verbal narrative and Biology (Plant cell).
- (c) Process of imaging: (Attendance: 14) Relaxation exercises. A short verbal narrative was done by R while Ls were closing their eyes. Ls were instructed to form mental pictures on the narrative.

R gave each L a copy on Biology text about the plant cell. Activation of prior knowledge on the plant cell was done by asking questions. Most Ls had no understanding or knowledge of the plant cell. R had to explain the plant cell, its function and how to identify it.

Ls were divided into groups of threes and were instructed to read the text on the plant cell. As the Ls read the text, R guided them on how to form a mental picture on the plant cell. Ls read the text for the second time for clarity.

Reading was relatively simple since it was a short text and was mostly written in point form. R explained terms like transparent, cellulose and permeable. Questions asked by R also aided in the understanding of the text by means of forming mental pictures. Ls were instructed to draw a plant cell as homework.

(d) Reflection

Attendance: The attendance of the sessions is stabilising since Ls are already used to one another. Ls also help in calling or urging other Ls to attend.

Learners: The participation of Ls was positive and they processed the narrative without any difficulty. They read the passage with little difficulty. New terms were explained by R and that enhanced the use of imaging and comprehension. Guided imaging while Ls read the Biology text seemed helpful and Ls appeared to realize that it helped them to remember the information.

Interpretation: The use of imaging for the learning of other subjects is progressing well. R still has to play a key role when facilitating learning through imaging. Observation and timeous identification of problems experienced by Ls is vitally important in enabling R to adapt the technique. Preparation and developing interest in Ls have been crucial in developing the mastery of imaging.

Next session: To enhance the learning of Biology through imaging.

(16) **Session Fifteen (2001-08-22)**

- (a) Objective: To enhance the learning of Biology through the use of imaging.
- (b) Preparation: Biology text (Animal cell).
- (c) Process of imaging: (Attendance 15) Discussion on the previous session. Relaxation exercises. Activation of prior knowledge on the animal cell.

Ls were guided by means of questions to activate their prior knowledge on the animal cell. Information gained on the plant cell was also used in the learning of the animal cell. R explained the difference between the plant cell and the animal cell. The function of the animal cell in the body was also explained since Ls appeared to have little information about the animal cell too.

R handed out copies on the plant and animal cells. Ls worked in groups of threes and fours. Ls were instructed to read the text while forming mental pictures on the text. R demonstrated that Ls should construct mind maps on the animal cell by writing the key words. Mind maps helped Ls to construct holistic imaged picture of an animal cell.

Group participation during the reading was positive. The explanation of new terms enhance understanding. R instructed Ls to read about the cell membrane. Comparison between the plant cell and animal cell was done in groups. Ls were instructed to identify the similarities and the differences in the plant cell and the animal cell. Ls were instructed to form mental pictures on the plant cell and the animal cell. By means of mind maps after imaging Ls were able to show the differences and similarities of the cell wall and the cell membrane.

R stopped the discussion and gave Ls comprehension questions on the plant and an animal cell. Ls were instructed to work individually in order to assess their ability to use imaging for the learning of other subjects.

(d) Reflection

Attendance: Absenteeism from the fifteen Ls who remain is no longer a problem.

Learners: The participation of Ls during the process of imaging was good. Ls were more involved and asked questions freely where they did not understand. The explanation of animal cell helped Ls to form mental pictures. The use of mind maps also made the learning of Biology simpler and interesting. Ls mentioned that they understood the plant and animal cell clearly for the first time. More Ls managed to identify the difference between the cell wall and cell membrane.

Interpretation: The use of imaging for the learning of other subjects has demanded hard work from R. If Ls lack a lot of information about the content, imaging is difficult. The use of imaging by constructing mind maps help Ls to form a gestalt about the learning content. Once Ls were able to visualize the learning task, then they were able to connect new information with their prior knowledge, which then led to comprehension. The use of mind maps about the learning content as a whole has enhanced comprehension and memory. The use of imaging is challenging when helping Ls who are experiencing a diversity of learning problems. Perseverance and thorough planning of R have promoted active learning in Ls.

Next session: To anchor the mastery of imaging for reading.

(17) Session Sixteen (2001-08-27)

- (a) Objective: To anchor the mastery of the imaging technique for reading.
- (b) Preparation: Reading text (Beverly Cleary)
- (c) Process of imaging: (Attendance: 14) Relaxation exercises.

R emphasized the following to be done during the process of imaging: formation of a holistic picture on the text while reading, continuous use of self-questioning while filling in gaps about the picture one is forming during imaging and awareness of the metacognitive skills during the processing of information and the use of the senses.

R gave Ls reading copies and divided them into groups of threes and fours. Ls were instructed to take turns reading paragraph by paragraph while the others followed in their copies. Concentration, paying attention and being focused while forming mental pictures was stressed. After reading each paragraph Ls had a discussion about their mental pictures.

Reading progressed adequately with little difficulty though Ls experienced difficulty with the pronunciation of a few unfamiliar words such as careworn, scarcely bear, lobby and contagious. By means of a few questions R showed Ls how they should continue reading even though they could not understand certain words that might not be critical to imaging. R instructed Ls to try to construct meaning of such words using their own prior knowledge. Activation of metacognitive skills by means of questions helped Ls to think and to process the text with more meaning. For example "The little girl was requested to go down and wait in a lobby". Ls were asked as to "where do people wait in a hospital? What was that place called?" Ls then realized that a lobby was a waiting area.

The discussion of each paragraph was productive and meaningful. Ls were able to express the feelings of the characters. They were able to form mental pictures about the hospital, the man, the girl and the nurse. The use of imaging made it possible for Ls to position themselves within the text.

Only a small section of the text was read since R was facilitating the mastery of the imaging technique especially with the weaker Ls such as 1, 4, 6, 7, 9, and 10. Other Ls were progressing very well. Ls were instructed to draw their mental pictures.

(d) Reflection

Attendance: Attendance is now fair and stable.

Learners: Ls' reading and participation seems promising. Each paragraph was read with more expression and the formation of mental picture is improving. The drawings show that Ls understand how to use imagery and are able to recall the events in the text. Communication among Ls has improved very well. They are no longer afraid to talk since they are encouraged to use their mother tongue when they cannot express themselves in English. The use of the mother tongue enhances the use of metacognitive skills and comprehension of the text.

Interpretation: The use of imaging is being anchored in Ls. Positive participation of Ls is encouraging to R. Small groups of Ls are easily manageable and group participation is becoming more meaningful. Ls are showing much improvement in reading comprehension skills. Positive feedback given is encouraging to Ls. It makes them feel that they have been able to master some learning during these sessions. Ls are more motivated than before. Regular attendees find these sessions more relevant and also encourage dodgers to attend too. R is happy about the progress achieved. It is rewarding to see how Ls are improving their reading skills. R has communicated with the English teachers especially to observe the progress of these Ls in their schoolwork, if there is also some improvement.

Next session: To continue to instil the use of imaging technique and how to use inferences when reading.

(18) Session Seventeen (2001-09-03)

(a) Objective: To instil the use of the imaging technique.

(b) Preparation: Reading text (Beverly Cleary) continued.

(c) Process of imaging: (Attendance: 14) Relaxation exercises. Ls were divided into groups of fours. R gave each L a copy of the reading text. Ls were instructed to read the passage. Ls who still experience problems with decoding were instructed to read sentence by sentence while those who read better read a paragraph at a time. Ls discussed the text and their mental

pictures per paragraph. The use of self-questions was emphasized while forming mental pictures and for the clarification of the text.

R paid more attention to the struggling readers since their inability to read also hampered the process of imaging. After reading each sentence, R demonstrated to the Ls how to ask themselves questions so that they could form mental pictures that would lead to comprehension. This process went on with all Ls who had difficulty with reading.

R observed some improvement with the Ls, 2, 9, 10, 13 and 14 who had difficulty reading. They managed to understand the text and were able to form mental pictures. Ls 1 and 4 were still struggling with the pronunciation of words. The exercise was time-consuming, however. Other Ls such as Ls 3, 5, 6, 7, 8, 12, and 15 were left to continue with reading while R helped the slow ones. Ls were then instructed to draw mental pictures about the text.

(d) Reflection

Attendance: L 11 who is a regular attendee is in hospital due to food poisoning.

Learners: The participation of Ls in their groups was good. Discussion of mental pictures and the text was more spontaneous than before. There are Ls who have little difficulty with reading. Ls who have difficulty with reading have also made some progress since R concentrates on them, helping with pronunciation and use of self-questions. The drawings done by all Ls indicate that they have understood the text. Even the Ls who are struggling managed to draw relevant pictures about the text. The use of inferences was done fairly well.

Interpretation: The use of the imaging technique would be much simpler and faster if Ls were determined to practice reading in their free time and saw the need to improve. Intrinsic motivation plays an important role in helping Ls to acquire reading comprehension skills through imaging. The imaging technique enhances self-regulatory learning where Ls learn to monitor their reading and the progress they are making. Imaging also improves good quality involvement of Ls during the learning process. Group work which is usually done during imaging is vitally important for co-operative learning where Ls are able to help one another.

The use of imaging on the part of the researcher demands the ability to be creative, sensitive of Ls' difficulties and to motivate and encourage Ls who are struggling since they usually give up easily. The adaptation of the technique has been imperative in all sessions in order to enhance the mastery of its use during reading.

Next session: To identify and assess the barriers still obstructing Ls from the mastery of the imaging technique.

(19) Session Eighteen (2001-09-05)

- (a) Objective: To identify and assess the barriers obstructing the mastery of the imaging technique.
- (b) Preparation: Reading text and comprehension questions to be answered orally.
- (c) Process of imaging: (Attendance: 14) Relaxation exercises. Oral comprehension questions on the text read in the previous session. R asked Ls questions to assess if they understood the text and to identify the difficulties that were still obstructing some of the Ls in mastering the imaging technique when reading.

Ls were instructed to continue with the reading of the text done in the previous session. R continued helping the struggling Ls. Ls 1, 4, 10 and 14 were put in amongst good readers so that they could be able to follow while others read. When it was their turn R assisted them with pronunciation and by means of questions helped them to use their metacognitive skills to make sense out of the text. Reading continued to the end of the passage. The discussion of the mental pictures and the text was more meaningful with most Ls.

(d) Reflection

Attendance: L 11 who was poisoned is still in hospital. Ls Ea, Eb, Ec, Ed and Ee have stopped attending the sessions altogether. Hence they are no longer regarded as part of the group.

Learners: Reading progressed well since most Ls could read adequately and had no difficulty with imaging. The discussion of mental pictures and the text was adequate to good. English was more frequently used than the mother tongue. The English language use is still full of grammatical mistakes. Their courage to use English has developed positively. Ls 1, 4, 10 and 14 still need some guidance and practice with reading.

Interpretation: Ls who had difficulty in mastering imaging could not understand and interpret the oral comprehension questions correctly. Their difficulty is mostly the use of English as the language of learning and teaching. Ls fail to process the new written information from the text and to assimilate it into their existing cognitive structure-what they read makes no sense to them hence imaging is difficult. Their level of English knowledge is far below their age and grade level. Most of these Ls have been pushed from one grade to another due to age. Others have repeated one grade more than twice.

Ls who have improved in reading answered the question very well, but still have some difficulty with questions that need some reasoning. This suggests that they only have literal meaning of the text but they are unable to use inferences while reading to achieve comprehension.

Next session: To assist Ls in the development of reading comprehension skills through imaging.

(20) Session Nineteen (2001-09-10)

(a) Objective: To assist Ls in the development of reading comprehension skills through imaging.

(b) Preparation: Reading text (Beverly Cleary) and comprehension questions.

(c) Process of imaging: (Attendance: 11) Relaxation exercises. Ls were given reading copies and each L was instructed to read silently the whole passage while forming the overall picture of the story. Reading the passage individually was required since the text was being dealt with for the fourth time during this session.

R moved around observing how Ls interacted with the reading text. Some Ls read silently using their fingers to follow each sentence while others mumbled the words. R encouraged them to take time and not rush their reading so that they would have a clear picture in their minds about the whole text when they finish. If Ls did not understand meanings of certain words, R explained them. At the end of the reading R gave a short summary of the whole text. Ls were asked if they understood the text. All Ls said they understood.

R gave each L a copy of comprehension questions and an answer sheet. Ls were instructed to read the text once again before they answered. Ls were also instructed to form mental pictures about each question before they answered so that they could understand what the question required.

Some Ls read the text but some, especially L1, did not read the whole text again. Instead, these Ls rushed to answer, disregarding the instruction. R asked (L1) why she was already answering, she said she knew the text and was ready to answer. Ls who finished first were Ls 1, 2, 5, 6 and 7.

(d) Reflection

Attendance: Only 11 Ls attended the session. Ls 4, 10 and 13 were absent without any reason. L 11 is still in hospital.

Learners: Ls gave an impression that they understood the text and were ready for the comprehension questions. The general performance of Ls varied from poor to good. Their scores are as follows: Ls 1, 5, 6, and 7 ranged between 3-6 out of 17. Ls 8, 9 and 12 ranged between 8-8 1/2. Ls 3, 14 and 15 ranged between 11-17.

Interpretation: The performance of Ls in the comprehension questions indicated that progress was achieved by more than 50% of Ls who wrote the comprehension questions. Inability to understand English as the language of learning and teaching was the barrier which mostly had a negative impact. The text had been read in four sessions, explained, discussed and mental pictures formed and drawn, but Ls 1, 2, 5 6 and 7 still could not read the questions with understanding. Ls whose scores were poor gave irrelevant answers which showed that they did not understand the questions. More support on the development of English language is necessary in order to enhance the development of question comprehension. The use of imaging was appropriate, however, and did yield positive results. On the other hand, time of attending sessions has a negative impact on Ls' performance since they are tired and hungry and have to remain while other Ls go home. R is comfortable but not pleased with the progress made. Time is not enough to help the struggling Ls since when such attention is given, the Ls who are progressing well get bored.

Next session: Discussion on the problems experienced during the comprehension questions, and success and difficulties experienced during the use of the imaging technique.

(21) Session Twenty (2001-09-12)

(a) Objective: To find out from Ls their difficulties in the comprehension questions and review the use of the imaging technique as a whole.

(b) Preparation: Prepared topics for discussion.

(c) Process of imaging: (Attendance: 15) R instructed Ls to be relaxed and calm. R informed Ls that an open discussion was going to be conducted to look at their difficulties and success in comprehension questions of the previous week and the use of the imaging technique as a whole. The discussion was under the following topics:

- Problems experienced in answering the questions.
- Sessions that were difficult and easy.
- Difficulties with the mastery of the imaging technique.
- Barriers obstructing the development of reading comprehension skills.
- Support received from parents.

(d) Reflection

Attendance: All the Ls who have remained in the experimental group were present.

Learners: Ls expressed satisfaction with the use of the imaging technique. They did mention that at first it was difficult for them to participate in the group activities since they were not used to that. As the sessions continued they began to see that participation helped them to be active

Ls and it was not easy for them to forget some of the information especially if they drew pictures. Unfamiliar text was a problem since they could not figure out what they were reading about. Their inability to read aloud with understanding and expression was also mentioned by Ls. Ls did complain that having to stay after school, being hungry and also having to walk long distances were reasons which made them absent on certain days.

Ls indicated that English language was a great barrier to their mastery of imaging when reading. Unfamiliar words made it difficult for them to form mental pictures but after they were explained it was simpler. Ls also mentioned that it was difficult for them to concentrate if the text was difficult hence they lost interest quickly. Some Ls mentioned that perseverance and eagerness to improve their reading skills drove them to attend regularly.

Interpretation: The imaging technique is a feasible technique that can be used in township schools since it enhances group learning. The training of metacognitive skills is vitally important in order to help Ls to be aware how to use their metacognitive skills during reading. A group of five to six Ls would have been more appropriate in helping Ls who experience a diversity of learning problems. R found that it was difficult to assist so many Ls in each session. When a few Ls were present it was much better since R was able to give undivided attention to Ls who experienced more difficulty than others. It was also difficult to continue with Ls who improved faster than others while some lagged behind. More support on the development of English language is crucial in the development of reading habits and in developing reading comprehension skills through the use of the imaging technique. Ls indicated that their parents were only involved when they asked about their progress in the reading support.

Learners who attended most sessions performed better than those who were often absent. The use of group discussion encouraged active learning. The imaging technique enhanced the use of metacognitive skills and affective process. The activation of prior knowledge, use of self-questioning and the discussion of text enhanced the development of reading comprehension skills. The imaging technique helped learners to be meaningfully involved during reading and enhanced memory.

The development of the reading comprehension skills is negatively affected by lack of reading books at home and at school, lack of parental support, inadequate reading ability and lack of basic communication skills in English. Learning problems experienced by some Ls have a negative impact in the development of the reading comprehension skills of township secondary school learners.

3.3.3 Control group treatment: Dictionary method

The control group used the dictionary method where support in the development of reading comprehension skills was done through the explanation of the unfamiliar words. This group used all the same texts and wrote all the same comprehension questions as the experimental group. The researcher guided learners on reading with comprehension by reading sentence by sentence. The researcher gave learners the meaning of unfamiliar words since learners had no dictionaries. The meaning of words were only given when learners experienced difficulty with them.

Group participation was done where learners discussed each paragraph after reading aloud. Learners took turns reading the text. The researcher encouraged the learners to ask one another questions on the paragraph for more clarity. Learners were instructed to ask themselves questions while reading with an aim of constructing meaning. This helped learners to use their metacognitive skills. The researcher moved around listening and assisting learners with pronunciation of unfamiliar words. Some learners had difficulty reading aloud. Group participation helped learners to be attentive, to concentrate and to be focused. The comprehension of the text appeared easier with the control group since learners were given the meaning of unfamiliar words. This group was also guided on how to read with meaning, correct intonation and phrasing while observing punctuation marks.

Learners in the control group who progressed well in developing reading comprehension skills were those who came from the township than from the informal settlements. Some of the learners who obtained lower scores in the post-test than in the pre-test attended more sessions such as L8 and L10. L 10 who obtained a score of 9 in the pre-test drop, to 5 in the post-test due to family problems that he experienced just before he wrote the post-test.

As in the experimental group, lack of reading books at home and at school had a negative impact in the development of reading comprehension skills. Poor English language skills negatively affected their performance especially in answering of comprehension questions.

3.3.4 Interview with learners

(1) Introduction

Interviews were conducted with learners after the completion of the reading support. Three learners from each research group, that is, experimental, control and non-treatment groups, were selected: those learners whose improvement score in the post-test was the highest as well

as those whose improvement score was average and lower. A tape recorder was used to audiotape the interviews. The interviews contained open-ended questions and semi-structured questions.

(2) The learners' responses on the interviews (Experimental Group)

(a) Learner E3-H

Learner E3-H⁶ (pre-test 4, post-test 15) mentioned she enjoyed the reading support and said that it helped her with reading and how to understand other subjects like English and Social Studies. She indicated that the session that had been difficult for her was on the text about the turtle (The wreck of the Zanzibar). She also mentioned that she enjoyed imaging when the narratives were done. She pointed out that when she answered the pre-test it was difficult and she did not understand the questions. When answering the post-test it was easier due to her ability to use imaging. She pointed out that she was now able to read with meaning. She said her parents were only involved in asking her about her progress during the reading support but no extra help was given. The learner said that she had no problem with the reading support sessions being conducted in the afternoon.

(b) Learner E5 A

Learner E5-A (pre-test 5 post-test 11) indicated that before he began with the reading support he had difficulty understanding what he read. After attending the reading support he was able to read with more comprehension. He mentioned that at first he did not know how to form mental images. Guided imagery and the discussion of mental pictures helped him how to use imaging for reading. He further pointed out that the desire to learn to read with comprehension motivated him to attend most of the sessions. He said that when he read the pre-test comprehension he had no clue what the text was all about. But when he answered the comprehension questions for the second time during the post-test it was simpler though he still could not understand certain questions. He mentioned that his parents did ask him about his performance during the reading support but no support as far as reading was given.

(c) Learner E6-L

Learner E6-L (pre-test-5 post-test 7) indicated that the reading support had helped him with the comprehension of text when reading. He said that at first he had had difficulty understanding what he read. He mentioned that some sessions were more difficult than others. Concerning the answering of the pre-test and the post-test, he said that he had had difficulty in understanding

⁶ Learner with the highest score has a symbol E 3-H, average score E 5-A and the lowest score E 6-L.

the comprehension questions. He mentioned that English was his difficulty. He pointed out that attending the reading support helped him in improving his English subject, especially during the September test. He also mentioned that he had been motivated to attend because he wanted to improve his reading comprehension skills. He indicated that his parents asked him about his performance time and again. He said that after school was at an appropriate time for the reading support programme. He also highlighted that lack of English language was still his difficulty hence he could not interpret the comprehension questions correctly when he answered the post-test.

(3) Learners' responses on the interviews (Control Group)

(a) Learner C-6H

Learner C 6-H (pre-test 7, post-test 16) mentioned that at first she did not like reading since she experienced difficulty with comprehension. She pointed out that she did not understand certain words. Attending reading support sessions helped her to read with understanding. She mentioned that she enjoyed most of the sessions because she received attention and the fact that they were fewer in the group than when she was in class. She highlighted that her motivation to attend the reading support was due to her eagerness to improve her English performance. She said her performance in September tests improved in English and History. Her parents were always inquiring about her progress in the reading support.

(b) Learner C-13A

Learner C-13A (pre-test 12, post-test 16) pointed out that attending reading support helped her because she was struggling in English. She said she was not interested in reading since it was difficult for her to understand what she read. Her major problem was her inability to understand unfamiliar words and she had no dictionary. Reading support helped her to read with comprehension and to participate during the discussions. She mentioned that another problem was her difficulty to understand questions. After attending reading support she was able to understand questions more than before. She said she improved in English and Science because she was able to read with comprehension. She said her parents always asked her about her performance during the reading support. She mentioned that she had no problem with the afternoon time for reading support.

(c) Learner C-10L

Learner C-10L (pre-test 9, post-test 5) mentioned that he had difficulty with reading before he attended the reading support. He said that he did not understand what he read hence he did not like reading. By attending the reading support it helped him with reading comprehension

and he was able to enjoy reading more than before. He mentioned that he was motivated to attend because he wanted to improve his English performance and also in the other subjects. He pointed out that he used to get zero in comprehension tests but now he was better. He mentioned that his mother did check his reading texts to see how he was progressing. He said his performance in the post-test was negatively affected by his family problems that occurred just before he wrote the test. He mentioned that understanding questions was still difficult for him.

(4) Learners' responses on the interviews (Non-treatment Group)

(a) Learner NT-5H

Learner NT-5A (pre-test 6, post-test 9) mentioned that he liked reading newspapers. He said that he is not performing well in English. He indicated that he has difficulty understanding what he reads. He mentioned that it was difficult to answer the comprehension because he did not comprehend and the questions were also difficult. When he answered the comprehension for the second time he felt it was better than the first time. He believed that he would have improved his reading comprehension if he could have attended the reading support.

(b) Learner NT-14A

Learner NT-14H (pre-test 10, post-test 11) indicated that she generally liked reading. She said she was performing well in English. She mentioned that the comprehension test she wrote was difficult. She said she could not understand certain paragraphs and the questions. She mentioned that she has difficulty with unfamiliar words. She pointed out that her second attempt of the comprehension was better because she remembered the text. She said that if she had attended the reading support it would have helped her with vocabulary.

(c) Learner NT-9L

Learner NT-9L (pre-test 8, post-test 3) indicated that she does not like reading. She said her difficulty was comprehension hence she had no interest in reading. When answering the comprehension test for the first and the second time she said it was difficult. She mentioned that she did not understand the questions. She also pointed out that her poor performance in the post-test was due to her behavioural problems such as dodging of periods and not doing her work in class. She said that if she had attended the reading support her performance in English could have improved.

3.3.5 Results and findings

Table 3.4 contains the pre-test and post-test scores of the research groups.

Learners	Experimental Group		Control Group		Non-Treatment Group	
Learners	Pre-test test	Post-test	Pre-test test	Post-test	Pre-test test	Post-test
1	2	2	1	1	2	*
2	3	11	4	8	3	7
3	4	15	6	8	4	6
4	5	4	6	9	6	*
5	5	11	7	10	6	9
6	5	7	7	16	6	*
7	6	7	7	4	7	5
8	7	8	8	4	7	7
9	8	*	8	11	8	3
10	8	5	9	5	8	7
11	8	10	9	13	9	7
12	9	10	10	9	9	*
13	9	10	12	16	10	4
14	10	7	12	14	10	11
15	15	16	14	11	15	*
Mean	6.9 (17.3%)	8.2 (21.9%)	8.0 (20.0%)	9.2 (23.1%)	7.3 (18.3%)	4.4 (16.5%)

* Learners did not write the post-test.

(1) Overview

Table 3.4 indicates the overall performance of learners in the three groups. The quantitative results of the post-test indicate that the experimental group improved more than the control as well as the non-treatment group. The experimental group improved by an average percentage of 4.6%, the control group by 3.1% while the non-treatment group dropped by -1.8%. There was a movement of improvement in learners who obtained lower scores in the pre-test. L2, and L3 in the experimental group improved by more than 20%. In the control group L2 improved by 10% and L6 improved by 22.5%. In the non-treatment group L2 improved by 10%. These learners improved with higher percentage when compared with the learners who obtained higher scores in the pre-test.

(a) Experimental Group

The Table 3.4(a) compares the pre-test and post-test scores of the experimental group.

Table 3.4(a) Post-test results: Experimental Group

Learners	Age on 2001/06/01	Years in Sec. School	Home	Sessions attended	Pre-test Scores		Post-test Scores	
					/40	%	/40	%
L1	18yrs.6ms	3	Township	13	2	5	2	5
L2	16yrs.4ms	3	Informal Settlement	19	3	7.5	11	27.5
L3	15yrs.7ms	4	Township	20	4	10	15	37.5
L4	17yrs.11ms	4	Informal Settlement	12	5	12.5	4	10
L5	16yrs.0m	3	Township	18	5	12.5	11	27.5
L6	16yrs.8ms	3	Township	20	5	12.5	7	17.5
L7	15yrs.6ms	3	Township	20	6	15	7	17.5
L8	15yrs.11ms	3	Township	19	7	17.5	8	20
L9	17yrs.7ms	4	Informal Settlement	12	8	20	*	*
L10	18yrs.11ms	4	Township	11	8	20	5	12.5
L11	16yrs.7ms	3	Township	17	8	20	10	25
L12	13yrs.9ms	2	Township	17	9	22.5	10	25
L13	14yrs.5ms	3	Township	14	9	22.5	10	25
L14	15yrs.2ms	3	Township	20	10	25	7	17.5
L15	17yrs.11ms	3	Township	18	15	37.5	16	40

Only 14 learners wrote the post-test. One learner had left the school during the reading support programme. There are 5 learners who are overage and 1 learner is under age. Only 4 learners attended all the 20 sessions: L3, L6, L7, and L14.

Learners who had obtained low scores in the pre-test generally improved more than the learners who had obtained higher scores in the post-test. L3 obtained a score of 4 in the pre-test and a score of 15 in the post-test, improving by 27.5%. L15 who had obtained a score of 15 in the pre-test, improved by only 2.5%.

Learners who obtained scores of 3, 4 and 5 in the pre-test improved by more than 20% in the post-test. Learners whose scores ranged between 7-15 in the pre-test improved slightly in the post-test. L1 and L4 who appeared to be experiencing intellectual disabilities did not improve in their performance-instead, L4 obtained a lower score in the post-test. These learners are both overage and L1 was absent in 7 sessions and L4 in 8 sessions. The two learners struggled throughout the reading support. Out of the fourteen learners who wrote the post-test, three learners obtained lower scores as compared with the pre-test.

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The poor attendance by some learners, especially those who appeared to be experiencing learning difficulty, seemed to have a negative impact in their performance (or vice versa). Afternoon reading support was an appropriate time but the long distances some learners had to walk, hunger which some learners suffered, and family commitments like fetching children from day care centres had a negative effect on attendance and thus on the development of their reading comprehension skills.

(b) Control Group

Table 3.4(b) Post-test results: Control Group

Learners	Age on 2001/06/05	Years in Sec. School	Home	Sessions attended	Pre-test Scores		Post-test Scores	
					/40	%	/40	%
L1	17yrs.8ms	3	Township	15	1	2.5	1	2.5
L2	14yrs6ms	3	Township	15	4	10	8	20
L3	16yrs.1m	3	Township	16	6	15	8	20
L4	19yrs.2ms	3	Township	17	6	15	9	22.5
L5	18yrs.1m	4	Township	16	7	17.5	10	25
L6	16yrs2ms	3	Township	18	7	17.5	16	40
L7	16yrs1m	3	Informal Settlement	16	7	17.5	4	10
L8	16yrs11ms	3	Informal Settlement	20	8	20	4	10
L9	15yrs1m	2	Township	18	8	20	11	27.5
L10	16yrs11ms	3	Informal Settlement	18	9	22.5	5	12.5
L11	16yrs1m	4	Township	15	9	22.5	13	32.5
L12	15yrs6ms	2	Informal Settlement	15	10	25	9	22.5
L13	14yrs8ms	3	Informal Settlement	15	12	30	16	40
L14	15yrs.11ms	3	Township	17	12	30	14	35
L15	16yrs.7ms	3	Informal Settlement	17	14	35	11	27.5

Table 3.4(b) indicates the post-test results of the control group. The control group used the dictionary method as a support in the development of the reading comprehension skills. At first learners were given a text to read in their respective groups. Each learner was instructed to read a sentence taking turns while others followed in their texts. At the end of the paragraph learners had a discussion on the paragraph. The researcher walked around listening and verifying whether learners understood what they read. During the discussion other learners were instructed to ask the learner who was discussing questions for more clarification. Learners were encouraged to assist one another in their groups in giving relevant information when irrelevant information was given. This enhanced group participation.

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During the reading process the researcher found that most learners had difficulty reading aloud. They had problems with the pronunciation of unfamiliar words as well as their meanings. The researcher gave learners the meanings of unfamiliar words and assisted them with pronunciation. In order to enhance the comprehension of the text, the researcher wrote down all the meanings of words that were unfamiliar to the learners every time when a new text was read. All learners had no dictionaries hence the meanings of words had to be written down. The researcher first gave a general overview on the text before it was read to help the learners to have a picture on what they were going to read about.

During the discussion of the text learners had difficulty expressing themselves in English. The researcher allowed the learners to use their mother tongue. The use of mother tongue enhanced the meaningful participation of the learners in their groups and the researcher was able to see if learners understood the text or not. The explanation of the meanings of the unfamiliar words and the group discussions had a positive effect in the development of the reading comprehension skills. When comprehension questions were asked most learners managed to give relevant answers.

The use of the dictionary method appeared to be helpful in understanding the text but only when the meanings were given. When learners were given a text to read and comprehension questions to answer, they still experienced difficulty with comprehension of the text. Lack of vocabulary, poor decoding skills, inability to interpret the questions and poor English language development, negatively affected the development of the reading comprehension skills even though the dictionary method was used. L1 who appeared to be experiencing intellectual disability had difficulty in improving his reading comprehension skills.

Out of the fifteen learners who wrote the post-test, four learners obtained lower scores than in the pre-test. L1 maintained the same score in both tests. L2 improved by 10% while L2 in the experimental group improved by 20%, L6 improved by 22,5% and L9 by 7.5%% in. The overall performance of the control group indicate that it was lower when compared with the experimental group and the non-treatment group even though they obtained high scores in pre-test. The results indicate that the improvement that occurred cannot be absolutely ascribed to the dictionary method. Hawthorn Effect, the explanation of the background of the text, the motivation of learners and their willingness to learn had a positive impact in the improvement of their performance in the post-test.

(c) Non-treatment Group

Table 3.4(c) contains the post-test results of the non-treatment group. Only ten learners wrote the post-test. The other five learners did not turn up due to absenteeism.

Table 3.4(c) Post-test results: Non-treatment Group

Learners	Age on 2001/06/01	Years in Secondary School	Home	Pre-test Scores		Post-test Scores	
				/40	%	/40	
L1	18yrs.0m	3	Township	2	5	*	*
L2	17yrs.7ms	4	Informal Settlement	3	7.5	7	17.5
L3	18yrs.0m	3	Township	4	10	6	15
L4	18yrs4ms	4	Township	6	15	*	*
L5	18yrs3ms	3	Informal Settlement	6	15	9	22.5
L6	14yrs.5ms	2	Informal Settlement	6	15	*	*
L7	14yrs.8ms	2	Township	7	17.5	5	12.5
L8	17yrs.1m	4	Township	7	17.5	7	17.5
L9	15yrs.9ms	3	Township	8	20	3	7.5
L10	16yrs.11ms	4	Township	8	20	7	17.5
L11	19yrs.9ms	4	Informal Settlement	9	22.5	7	17.5
L12	15yrs.0m	2	Informal Settlement	9	22.5	*	*
L13	18yrs.2ms	3	Informal Settlement	10	25	4	10
L14	16yrs.2ms	3	Township	10	25	11	27.5
L15	17yrs.3ms	4	Township	15	37.5	*	*

The non-treatment group did not receive reading support. The results indicate that two learners (L2 and L5) improved by more than 10% while L3 by 5%. L8 maintained the same score in both pre-test and post-test. Five learners obtained lower scores in the post-test. The improvement that occurred in this group may be attributed to the Hawthorn Effect since some of the learners did mention that they remembered the comprehension test they answered during the pre-test though it was written after six months. Lack of support in the development of reading comprehension skills of these learners had a negative impact in their performance in the post-test.

3.4 DISCUSSION

3.4.1 Orientation

The discussion in this section will look at the reading comprehension performance results shown on Table 3.5.

Table 3.5 Analysis of the pretest and posttest results

Items	Experimental Group			Control Group			Non-treatment Group		
	Diff. in Performance	Diff. in Method %	Base of Error %	Diff. in Performance	Diff. in Method %	Base of Error %	Diff. in Performance %	Diff. in Method %	Base of Error %
1.1(o)	+51.43	+41.67	-8.33	-6.67	-11.11	+37.78	-3.64	-12.5	+49.21
1.2(a)(o)	-19.53	+15.38	-20.0	0	0	-53.85	+2.42	-7.14	+11.43
1.2(b)(o)	0	-100	-100	-0.47	0	0	0	0	0
1.3(o)	+7.62	-7.14	-10.39	+20.0	+12.31	+6.15	+2.42	-9.1	+15.0
1.4(o)	-3.44	-2.78	-23.21	+13.33	-8.33	+15.91	-15.38	-5.88	+30.56
1.5(o)	+0.47	0	+7.7	+40.0	+17.86	+8.93	+6.67	0	+36.37
1.6(o)	-7.14	-10.0	-4.55	-20.0	-2.5	-17.5	-15.38	0	-28.57
1.7(o)	+11.79	+47.73	+15.59	+20.0	-11.11	+14.0	-3.64	-23.08	+2.5
2.1(m)	-4.76	0	0(1) 0(3)	+26.67	-12.50	-3.41(1) +12.5(2) -9.09(3)	-15.15	+10.0	+6.67(1) -6.67(2)
2.2(m)	+19.04	+20.0	0(1)	+13.33	0	-33.33(1) +33.33(2)	+17.58	-50.0	-66.67(1) +66.67(2)
2.3(m)	-10.47	+16.67	0(1)	+13.33	-13.33	+33.33(1)	+15.15	-43.86	-66.67
2.4(m)	+15.71	+14.29	-3.57(1) +3.57(2)	+13.34	-4.17	-12.5(1) +20.83(2)	-44.24	+17.64	-30.0(1) +30.0(2)
2.5(m)	+7.14	+8.33	-22.22(1) +22.22(2)	-6.66	-13.9	+5.56(1) -5.56(2)	+12.12	-20.0	+6.67(1) -6.67(2)
3.1(o)	+7.14	+1.02	-10.77	-6.67	-8.24	+45.45	-15.38	-9.1	-6.67
O=Open questions; m=Multiple-choice questions									

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Items	Experimental Group			Control Group			Non-treatment Group		
	Diff .in Performance (%)	Diff. in Method (%)	Base f Error (%)	Diff. in Performance (%)	Diff. in Method (%)	Base of Error (%)	Diff. in Performance (%)	Diff. in Method (%)	Base of Error (%)
3.2(o)	-3.44	-8.34	+6.99	-6.67	-20.13	-3.25	+9.09	-20.0	-51.47
3.3(o)	-3.44	0	-8.33	0	+7.69	+10.9	-6.67	0	+9.09
3.4(o)	+7.14	+1.66	-11.12	-13.34	0	+30.0.	-15.38	+7.69	+27.35
3.5(o)	+7.14	-7.14	+34.08	+6.67	-21.43	-11.43	+9.09	-21.74	-19.04
4.1(o)	+7.14	-22.44	-44.76	+6.67	+2.23	+1.82	+11.51	-10.0	+28.0
4.2(o)	-14.28	+8.33	-15.91	+20.0	+3.41	+3.41	-4.24	-12.5	-33.33
4.3(o)	-3.44	+25.25	+14.14	0	-2.27	-20.45	-6.67	-14.28	+20.83
4.4(o)	-3.44	+2.31	-3.08	0	-10.71	-10.71	-15.38	0	+33.33
4.5(o)	-3.44	+18.18	+27.27	+40.0	-3.89	+33.77	+11.51	0	+37.5
5.1(m)	+9.53	+10.0	-15.91(1) +15.91(2)	-2.0.0	-10.0	-30.0(1) +30.0(2)	+7.88	-7.7	+14.29(10) -14.29(2)
5.2(m)	+10.47	+12.50	-12.50(1) +12.50(2)	-24.76	0	-66.67(1) +66.67(2)	+16.36	-26.32	-27.38(1) +27.38(2)
5.3(m)	+0.47	-0.59	+4.94(1) +8.24(2) -20.88(3)	-6.67	0	+21.22(1) +3.78(2) -25.03(3)	-15.38	-15.38	-0.6(1) -8.49(2)
5.4(m)	+3.33	+12.50	-1.79(1) +1.79(2)	-6.67	0	-15.0(1) +15.0(2)	+10.31	-0.28	+17.86(1) -17.86(2)
5.5(m)	+3.33	+12.50	-37.50(1) -8.93(2) +46.43(3)	-13.33	+12.5	-12.50(1) -15.0(2) +27.5(3)	-35.15	+12.5	-6.35(2) +6.35(3)
Total	+91.98	+109.89	-162.38	+101.43	-97.62	+132.56	-92.91	-261.03	+86.33
Mean	+3.28	+3.92	-4.27	+3.62	-3.48	+3.31	-3.31	-9.32	+0.42

Table 3.5 indicates the statistical analysis of the items of the pre-test and the post-test. The difference in mean performance per item in the pre-test and the post-test results was calculated. The research group was too small to determine whether the statistical difference between the pre-test and the post-test is significant or not, but the educational value of the difference should also be considered. The positive sign figures indicate the amount of increase in the percentage of learners who answered the particular item correctly. The negative sign figures indicate the amount of decrease of learners who answered the item correctly.

The method the learners used when answering the items was analysed. For open questions (o) the method used was coded for whether learners formulated their own answers (1) or simply copied the answers from the text (0). For multiple-choice questions (m) the method used was coded for whether learners gave one response (1) or more than one response (0). The positive sign figures in the open questions indicate the amount of increase in the percentage of learners who formulated their own answers, while the negative sign figures indicate the amount of decrease in the percentage of learners who formulated their own answers. The positive sign figures for multiple-choice questions indicate the increase in the percentage of learners who gave only one response, while the negative sign figures indicate the decrease in the percentage of learners who gave only one response.

The base of error in the answering of items was analysed. This indicates what type of error learners made when answering incorrectly. For open questions, the errors committed by learners were coded for whether the statements are related (1) or unrelated (0) to the questions. For open questions the positive sign figures indicate the amount of increase in the percentage of learners who gave related though incorrect answers. The negative sign figures indicate the amount of decrease in the percentage of learners who gave related but incorrect answers. For multiple-choice questions, errors were coded for whether the choice of statement is due to guessing (1), reasoning error (2), half fact or incomplete reading of the questions (3) and whether the option selected has any reference to the text though unrelated to the question (4). The positive sign figures for code (1) indicate the amount of increase in the percentage of learners who guessed answers, for code (2) the amount of increase in the percentage of learners whose answers are due to reasoning error, for code (3) the amount of increase in the percentage of learners who gave half fact or due to incomplete reading of the question and for code (4) the amount of increase in the percentage of learners who gave incorrect answers with reference to the text though unrelated to the question.

The negative sign figures for each code indicate the amount of decrease in the percentage of learners who gave an incorrect answer due to the specific base of error.

3.4.2 Discussion

(1) Experimental Group

According to the quantitative analysis of the results in Table 3.5 the experimental group improved well (by more than 10%) in Questions: 1.1(o)+51.43, 1.7(o) +11.79, as well as in Questions: 2.2(m) +19.04, 2.4(m) +15.71 and 5.2(m) +10.47. Overall, they showed improvement in Questions: 1.3(o), 1.5(o), 2.5(m), 3.1(o), 3.4(o), 3.5(o), 4.1(o), 5.1(m), 5.3(m), 5.4(m) and 5.5(m). The drop in performance occurred in Questions: 1.2(a)(o), 1.2(b)(o), 1.4(o), 1.6(o), 2.1(m), 2.3(m), 3.2(o), 3.3(o), 4.2(o), 4.3(o), 4.4(o), and 4.5(o).

The analysis of the method used indicates that there was a dramatic increase of +41.67, +47.73 in Questions: 1.1(o) and 1.7(o) in the number of learners who formulated their own answers instead of copying text. In Questions: 2.2(m) and 2.4(m) there was an increase of +20.0, +14.29 in the number of learners who gave one response instead of more than one response.

The analysis of the errors indicate that there was an increase of more than 10% in Questions: 1.7) (o)+15.59, 3.5(o) +34.08, 4.3(o) +14.14, 4.5(o) +27.27 in the number of learners who gave related statements rather than unrelated statements even though they were incorrect.

The results indicate that the experimental group improved in Questions 1 and 2 in comparison with Question 3 and 4. Question 3 appeared to be more difficult for most learners who answered it. Learners were required to explain the statements but lack of language and vocabulary made it difficult for them to answer the questions correctly. Question 4 on the other hand contained questions which challenged their cognition such as why, how and what. Such questions seemed to be problematic to them. Learners could not use imaging to understand and to interpret the questions since the questions contained unfamiliar words they did not know.

The use of imaging technique such as the formulation of mental images while reading, the use of metacognitive skills, affective processes, the use of mother tongue, group participation such as the discussions and the drawing of images appear to have benefited learners who improved

their reading skills. Educationally the use of the imaging technique had positive results since the entire experimental group improved their English examination results at the end of the year. The English teachers pointed out that they had noticed some improvement in these learners.

The English language as the language of learning and teaching seemed to be the biggest barrier in the development of reading comprehension skills. Lack of vocabulary had a negative impact in the use of imaging since learners could not image about something they did not know. Learners also had difficulty in assimilating new information with their own existing information due to lack of language.

The general improvement that occurred showed that support had a positive impact in the development of reading comprehension skills of township secondary schools learners. Development of English language however, appears to be a prerequisite in the development of the reading comprehension skills when using the imaging technique for township secondary school learners. It was mentioned earlier that that this group consisted of weaker learners as compared with the other two research groups. Thus the results obtained should be understood against this background.

(2) Control Group

According to Table 3.5 the analysis of the results indicate that the control group improved well (by more than 10%) in Questions 1.3(o)+20.0, 1.4(o)+13.33, 1.5(o)+40.0, 1.7(o)+20.0, 4.2(o)+20.0 and 4.5(o) (+27.27) as well as in Questions 2.1(m)+26.67, 2.2(m)+13.33, 2.3(m)+13.33, 2.4(m)+13.33. Overall, they showed improvement in Questions 3.5(o) and 4.1(o). The drop in performance occurred in Questions 1.1(o), 1.2(b)(o), 1.3(o), 1.4(o), 1.6(o), 2.5(m), 3.1(o), 3.2(o), 3.4(o), 5.1(m), 5.2(m), 5.3(m), 5.4(m) and 5.5(m).

Questions 1.3(o) and 1.5(o) show that there was an increase of +12.31 and +17.86 in the number of learners who formulated their own answers instead of copying text. In most multiple-choice questions there was a decrease in the number of learners who gave one response with an exception of Question 5.5(m) where there was an increase in the number of learners who gave one response.

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The analysis of errors indicates that in Questions 1.1+ 37.78, 1.4+15.91 and 1.7+14.0, 3.3 +10.9, 3.4 +30.0, 4.5 +33.77 there was an increase in the number of learners who gave related answers rather than unrelated answers.

The control group improved in Question 4 when compared with the experimental group. This improvement seems to be related to the use of the dictionary that helped the learners with the meaning of unfamiliar words.

The control group experienced English language as problematic. The ability to read aloud such as pronunciation, intonation and phrasing was also a problem as in the experimental group. The development of reading interest, reading aloud, group discussions on the text and the use of dictionary helped them in the development of reading comprehension skills. The control group consisted of stronger learners when compared with the other two groups. This factor should be taken into consideration when looking at the results.

(3) Non-treatment Group

Only ten learners wrote the post-test. According to Table 3.5 this group improved well, (by more than 10%), in Questions: 4.1(o) +11.51, 4.5(o) +11.51 as well as Questions 2.2(m) +17.58, 2.3(m) +15.15, 2.5(m) +12.12, 5.2(m) +16.36 and 5.4(m) +10.31. Overall, they improved in Questions 1.2(a)(o), 1.3(o), 3.2(o), 3.5(o) and 5.1(m). There was a drop in performance in Questions: 1.1(o), 1.4(o), 1.5(o), 1.6(o), 1.7(o), 2.1(m), 2.4(m), 3.1(o), 3.3(o), 3.4(o), 4.2(o), 4.3(o), 5.1(m), 5.3(m) and 5.5(m).

The analysis of Questions 1, 3 and 4 (open questions) indicates that there was a drop in the number of learners who formulated their own answers. Question 2.1(m)(+10.0), 2.4(m)(+17.64) and 5.5(m)(+12.12) indicate an increase in the number of learners who gave one response instead of more than one response.

The analysis of errors indicate that there was an increase of more than 10% in Questions: 1.1(o)(+49.21), 1.2(a)(o)(+11.43), 1.3(o)(15.0), 1.4(o)(+30.56), 1.5(o)(+36.37), 3.4(o)(27.35), 4.1(o)(+28.0), 4.3(o)(+20.83), 4.4(o)(+33.33) and 4.5(o)(+37.5) in the number of learners who gave related answers rather than unrelated answers though they were incorrect.

The overall improvement was lower when compared with the experimental group and the control group. No reading support was given to these learners. The improvement in the post-test may be attributed to the Hawthorn Effect that occurred though it was written after six months. These results indicate that lack of support in this group had a negative effect on the performance of these learners.

3.5 CONCLUSION

This chapter has reported the practical investigation of the imaging technique and the analysis of the results. The quantitative and the qualitative results were analysed and discussed. Chapter Four will present the summary, conclusions, limitations of the research, and recommendations for further research and the enhancement of the reading comprehension skills of learners in township secondary schools.