

CHAPTER 5

5 RESULTS

5.1 Introduction

The primary aim of this investigation is to determine the relationship between reading ability in English as a second language and other subjects at matric level. This chapter describes the results of the investigation using the statistical techniques that were outlined in chapter 4. The results are structured in terms of the hypotheses. In the discussion section, the method used and the nuances of the investigation will be considered. The discussion section will also attempt to tie the results of the investigation to both the theory and the application by combining the theoretical background, literature review, and the potential significance for further applications of the investigation.

The results are summarized in table 5.1. In table 5.1 column one, the subjects in which the two groups participated, namely, English, Biology and History, are indicated. Column two of table 5.1 indicates the sample which consists of two groups, namely the experimental group represented by the letter E and the control group represented by the letter C. The experimental group consists of 55 pupils and the control group of 53 pupils for each subject and these numbers are recorded in column three. Columns four and five represent the means and the standard deviations of each group for the pre- and post-tests in each subject. Column six of table 5.1 represents the differences in academic achievement between the means of the pre- and post-tests (the improvement) and the standard deviations of the pre- and post-tests for the experimental and control groups. Column seven represents the differences in academic achievement between the experimental and control groups for the pre-tests in each subject. Column eight represents the differences in academic achievement for the means and standard deviations between the experimental group and the control group after the implementation of the programme in each subject. Column nine represents the t-test values of each subject for the

difference between the experimental group and the control group with respect to the improvement (column 6). Column ten represents the degrees of freedom. Column eleven represents the p-values.

1	2	3	4		5		Diff. 6		Diff.(E-C) 7		Diff.(E-C) 8		9	10	11
SUBJECT	GROUP	NUM- BER	PRE-TEST		POST-TEST		POST-, PRE-TEST		PRE-TEST		POST-TEST		T- TEST	DF	P
			$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
ENGLISH	E	55	52,4	11,2	72,7	12,4	20,3	1,2	4,6	4,5	26,2	6,1	11,6	64,4	0,0001
	C	53	47,8	06,7	46,5	06,3	-1,3	-0,4							
BIOLOGY	E	55	39,5	18,8	69,4	10,8	29,9	-8,0	10,2	7,8	35,9	-0,5	9,6	85,9	0,0001
	C	53	29,3	11,0	33,5	11,3	1,2	0,3							
HISTORY	E	55	34,5	17,0	68,6	13,8	34,1	-3,2	7,9	1,8	41,1	1,3	11,9	87,8	0,0001
	C	53	26,6	15,2	27,51	12,5	0,91	-2,7							
TOTAL	E	165	126,4	47,0	210,7	37,0	84,3	-10,0	22,7	14,1	103,7	6,9	33,1	73,3	0,0003
	C	159	103,7	32,9	107,5	30,1	103,8	- 2,8							

Table 5.1 Summary of the results

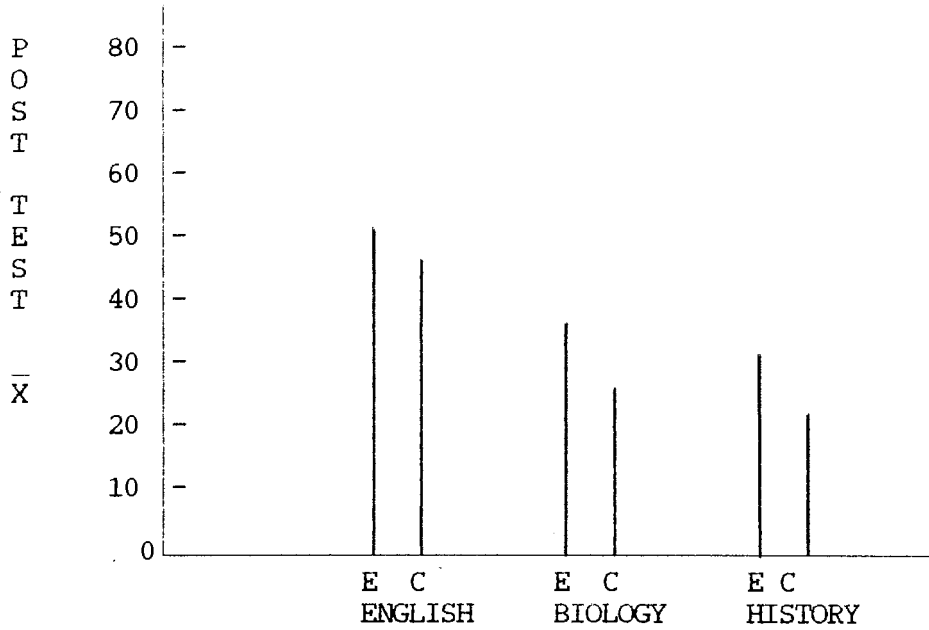


Figure 5.1 Academic achievement in the pre-tests

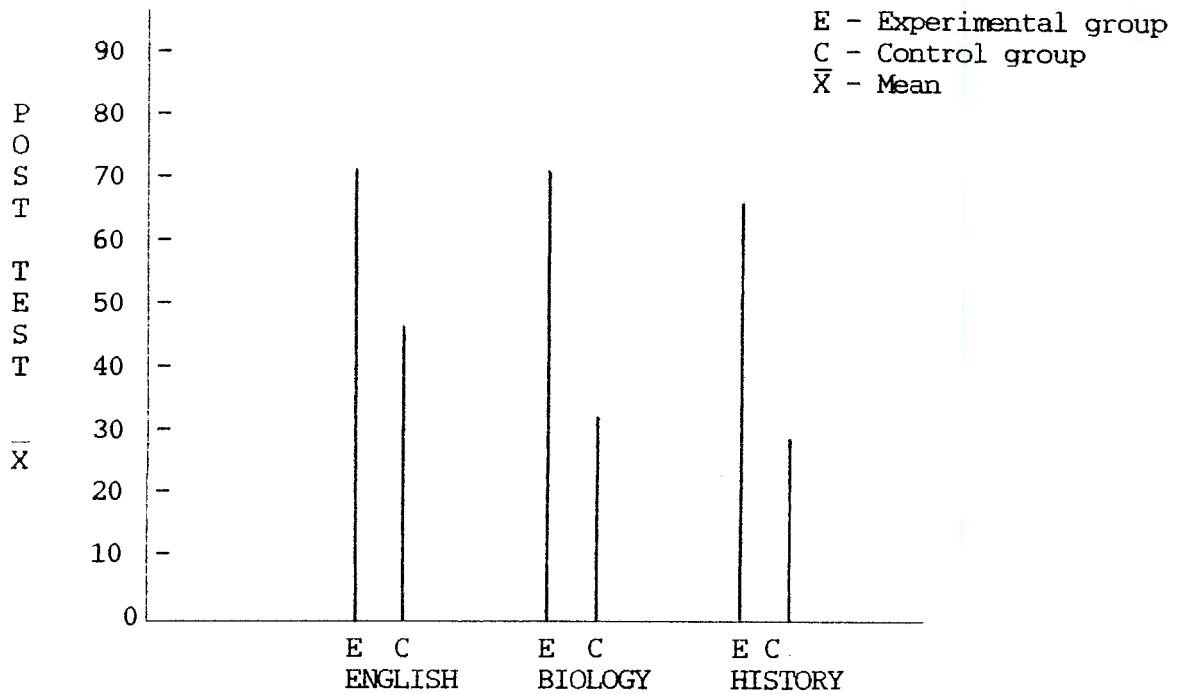


Figure 5.2 Academic achievement in the post-tests

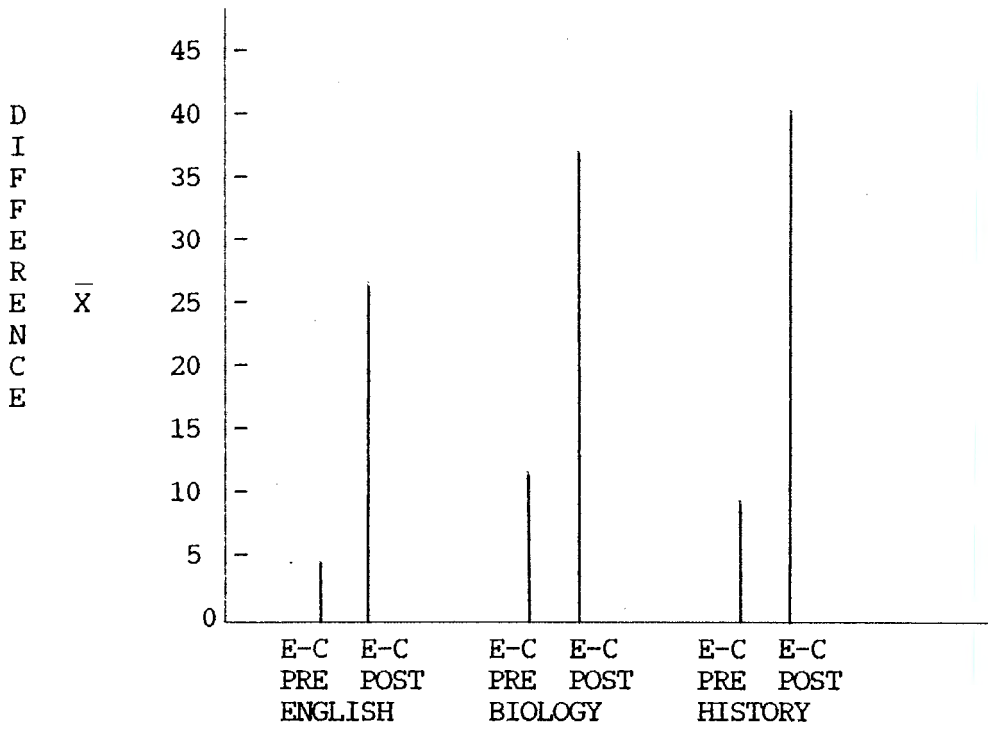


Figure 5.3 Difference between the experimental and control groups before and after the application of the programme in each subject.

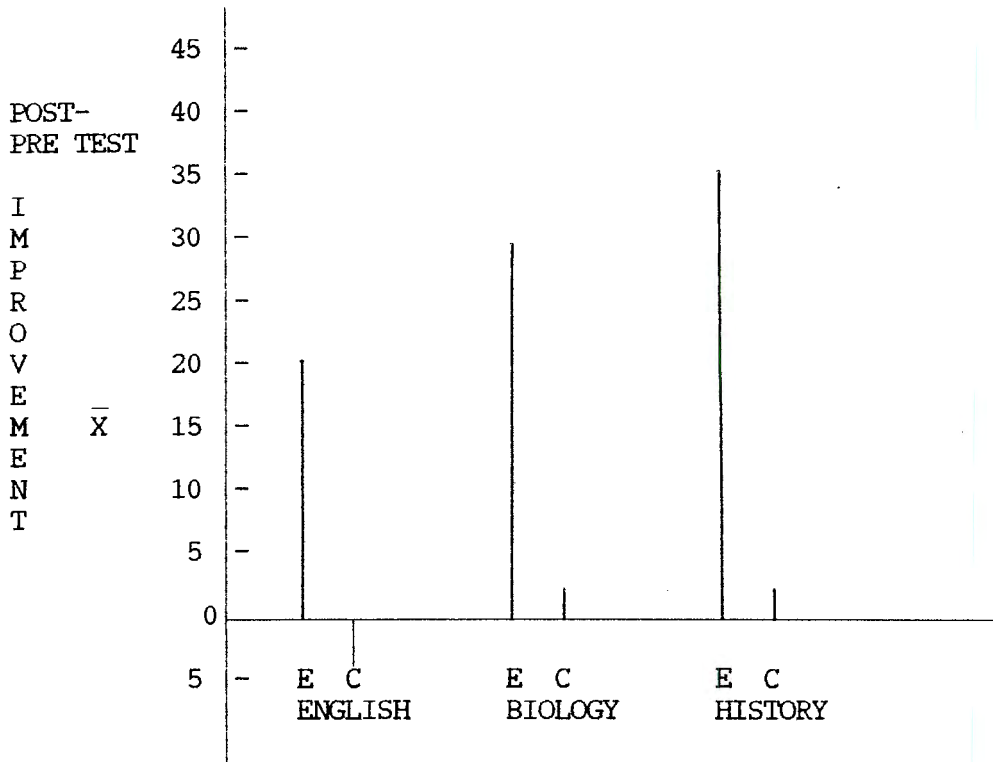


Figure 5.4 Improvement in academic achievement of experimental and control groups.

Figure 5.1 is a representation of the academic achievement, using the means in the pre-tests for both the experimental group and the control group.

Figure 5.2 is a representation of the academic achievement, using the means in the post-tests for both the experimental group and the control group.

Figure 5.3 is a representation of the difference between the experimental group and the control group before and after the application of the programme in each subject. This graph (figure 5.3) shows the initial differences that existed between the experimental group and the control group when they were tested before the application of the programme and compares it to the differences that existed after the application of the programme between the experimental and the control groups.

Figure 5.4 shows the improvement in the academic achievement of each group in each subject after the application of the programme. The experimental group shows an improvement in academic achievement after the application of the programme while the control group shows little improvement in the academic achievement after no application of any programme, to such an extent that in one case, that is in English, the control group showed a regression in achievement.

Reading ability was operationalized by means of a reading programme involving reading strategies which improve reading ability. The experimental group was taught by means of a reading programme while the control group was taught by means of traditional methods.

5.2 Hypotheses

5.2.1 Hypothesis one

Pupils who are exposed to a reading programme at matric level achieve better results in English as a second language than those who are not exposed to the reading programme.

The improvement in academic achievement in English between the experimental group and the control group differed.

$t(64.4) = 11.6 : p < 0,0001$ (see table 5.1).

The t-test indicated that there is a significant difference between the experimental group and the control group in academic improvement in English (see Fig. 5.4). Because the correlation between the achievements in the pre-test in English and the corresponding improvements in academic achievement in English of the experimental and control groups were low, ($r < 0,1$) the initial difference between the pre-tests of the experimental and control groups in English can be ignored. From figure 5.4 it can be seen that the improvement in English of the experimental groups is much greater than the improvement in English of the control group. This also indicates that the improvement in academic achievement of the experimental group in English was more than the improvement in academic achievement of the control group in English. It means that the improvement in academic achievement in English as a second language of the pupils who were exposed to the reading programme was more than the improvement in academic achievement of the pupils who were not exposed to a reading programme. Hypothesis one is therefore confirmed.

5.2.2 Hypothesis two

Pupils who are exposed to a reading programme at matric level achieve better results in other subjects than those who are not exposed to a reading programme. The other school subjects in this investigation are Biology and History.

The t-tests indicate that there are significant differences in the improvement in academic achievement of the experimental group and the control group in Biology and History.

Biology $t(85.9) = 9.6 ; p < 0,0001$

History $t(87.8) = 11.9 ; p < 0,0001$ (compare table 5.1).

Because the correlations between the achievements in the pre-tests of Biology and History and the corresponding improvements in academic achievement in Biology and History of the experimental and control groups were low, ($r < 0,1$) the initial differences between the pre-

tests of Biology and History of the experimental and control groups can be ignored.

Figure 5.3 indicates that the differences between the experimental and control groups before the application of the reading programme is less than the differences between the experimental group and the control group after the application of the reading programme in both Biology and History. Figure 5.1 indicates that there is very little difference in the academic achievement in Biology and History of both the experimental and control groups in the pre-tests, while figure 5.2 indicates that there is a greater difference between the academic achievement of the experimental group and the control group after the application of the reading programme. From these graphs, it can be deduced that the post-tests differences in academic achievement are greater than the pre-test differences in Biology and History. This means that the experimental group's improvement in Biology and History was better than the control group's improvement (see fig. 5.4). It means that the pupils who were exposed to a reading programme gained better results in Biology and History than the pupils who were not exposed to a reading programme, therefore hypothesis two is confirmed.

5.3 Discussion of the results

The results of the investigation showed that the improved reading ability through the medium of English as a second language affected the academic achievement of pupils in the subject English positively. The experimental group's improvement in achievement in English was better than that of the control group after the application of a reading programme. It was found by theorists (Spiro, 1980 : 451; McKeachie et al., 1986 : 25) that in order to apply reading ability in a learning situation, it is important for the learners themselves to be strategic during their reading process, hence the importance of teaching some reading strategies in the programme in which pupils participated in the experimental group.

The reading ability of the pupils in the experimental group were improved by means of reading strategies. The investigator taught the pupils in the experimental group, as they read the passage on "Unity in

Africa" (see appendix 6), for example, to think about the different states and actions that have been taken to obtain unity (for example in sports, tea club), and also to think about what they have already assigned to their personal domain about unity. This strategy led to a deeper processing of information and that improved comprehension and retention (Spiro, 1980 : 451). Pupils gave different properties of unity which they assigned to their personal knowledge. The aim of the investigator with the experimental group was for them to be specific in the use of strategies while reading the passages.

The control group's performance did not improve greatly as compared to the improvement of the experimental group in the post-tests in English (experimental group = 20,3 and control group = -1,3; table 5.1). The control group went through the reading programme using their traditional method, whereby the teacher came into the classroom, and merely instructed the pupils to read the passage and answer the questions that followed. They however, must have used strategies - whether one or more, poor or good. They probably used global strategies which lead to less specified reading actions.

Strategy researchers (Carrell; Pharis; and Liberto, 1989 : 648) suggest that less competent learners are able to improve their reading ability through training in strategies and that seems to have happened in this experiment.

The results of the investigation indicated that there is a relationship between reading ability in English as a second language and academic achievement in Biology and History because the experimental group's improvement in the two subjects in the post-tests was greater than the improvement of the control group.

English at matric level in the black schools is the medium of instruction for Biology and History and it is also a second language to black pupils. There is general agreement among educationists that reading strategies, such as monitoring the reading process, influence and improve information processing during learning (Keefe, 1986 : 3-4; Stubbs, 1983 : 15) (see par. 2.2 and par. 5.3).

Reading strategies had been taught to the experimental group and not to the control group. The experimental group's reading ability in English as a second language had therefore been improved. Reading and language are mostly used for learning Biology and History. It is therefore logical that an improvement in reading ability in English can lead to an improvement in academic achievement in Biology and History.

The experimental group's flow of information during the process of reading, that is information processing, had been improved by the teaching of reading strategies and therefore, influenced the learning of pupils positively. Transfer of the reading strategies was possible because the texts used in English, Biology and History were similar to the texts used to improve reading ability. The same type of reading strategies used in improving reading ability through the medium of English could therefore be used to read and learn the contents of English, History and Biology.

The results of this investigation are similar to the results of previous research on reading ability. Mawasha (1976 : 1-200) investigated the influence of reading ability in English on the scholastic achievement of students in Gazankulu. The results of his investigation revealed that the two variables are related by showing a high positive correlation. Mahlangu (1982 : 1-269) also investigated the influence of English on the scholastic achievement of Tsonga children. The results of his investigation showed a positive influence of improvement in reading ability in English, Biology and History on scholastic achievement. The results of the present investigation are quite similar to those of Mawasha and Mahlangu in the sense that it showed that the better the reading ability in English, the better the achievement in English, Biology and History.

The contexts of the previous research and this investigation however, were not the same. The difference between this investigation and the previous investigations was that this investigation was more specific with respect to the achievement in the different subjects and the strategies used in the experiment (reading ability was also operationalized differently). The previous research concentrated on scholastic achievement in a global sense, while the current

investigator concentrated on achievement in English, Biology and History. The investigator in this research became specific by finding out the relationship between reading ability in English as a second language and other subjects like Biology and History. The previous research were carried out at Gazankulu and Geyani while the investigator carried out this research in Bophuthatswana. Since the results are supported by previous research, there are certain implications of the investigation which should be heeded. These will be discussed in the final chapter (chapter 6).

CHAPTER 6

6 SUMMARY

6.1 Aim of the investigation

The aim of this investigation was to determine the relationship between reading ability and achievement in English as a second language and other subjects at matric level. To accomplish this aim a literature study was done and experimental research was conducted.

6.2 Overview of the literature study

In the literature study it was found that learning is an interactive process; the product of the interaction between the activities of teachers and pupils within the learning environment of the school. There is a general agreement among educationists that learning activities and language are crucial factors in a child's education. Language plays a central role in schools and classrooms. In the teaching environment pupils are dealing with language for most of the day through the spoken language of the teacher or the pupils, and through the written language of books.

It was also found that learning results in an observable change in a person's reaction which further constitutes a chain reaction, which is called, behaviour. Learning is the tracks left behind by thoughts; neural activity changes the neurons that are active, and that change is the structural basis of learning. The change occurs as a direct result of neural activity itself, in other words, as a direct result of processing of information. The major source of new ideas in recent years about learning has been provided by theories related to information processing, storage, and information retrieval.

Learning involves cognitive organization of information in the mind, where parts are integrated to form a whole. This whole is referred to as a schema. Schemata are the readers concepts, beliefs, and experiences organized into structures in long term memory, that are

used in making sense of things and actions. Factors such as prior knowledge, intellectual capability, environmental factors, motivational and emotional factors, learning strategies and learning styles influence pupils' learning and comprehension.

Learning consists of components, like course characteristics, study activities, student characteristics, and outcomes which have to be taken into consideration when one intends to improve the pupils' learning.

It was also found that learning entails comprehension, that is, understanding something, retaining its meaning, and being able to use or apply materials appropriately. When the reader comprehends, he is able to grasp the message conveyed by the writer and relate it to what he already knows. This process is very complex in (much) content area reading where the reader must go beyond individual words and sentences and deal with a stream of incoming concepts and information, page by page. Comprehension includes the ability to relate material to a personal framework of knowledge and the ability to apply concepts to new situations.

Abilities develop quite slowly across the years, but once developed, enable the individual to deal with his social and physical world more effectively. (For example, to read, communicate and comprehend the view of other pupils easily.)

The concept of ability is most meaningful when considered in connection with outcomes of learning and broad subject-matter. With respect to learning how to read, reading should be considered as interacting cognitive and linguistic processes leading to verbal efficiency and reading ability.

For many pupils, reading is the one skill they may continue to use to interpret the world once they have left the classroom. These pupils need strategies in order to apply this skill in life. Reading is more than assigning language sounds to the written words. It also requires the comprehension of what is written. Pupils differ in their ability to read their second language, and to read content subjects.

Teachers should use this and other knowledge about abilities to improve the instruction of individual pupils.

6.3 Method of investigation

The investigation was carried out with a hundred and eight matric pupils from the Ditsobotla circuit of Education. The pupils were divided into an experimental and a control group consisting of 55 and 53 pupils respectively. Both groups were tested before the experiment and after the experiment. The experimental group was exposed to a reading programme based on certain strategies consciously applied, whilst the control group was taught by means of the traditional method. The data was gathered and results presented through the use of diagrams, tables and graphs to get an overall picture. Because the aim of the investigation was to determine whether the reading programme caused a difference in reading ability and hence a difference in academic achievement in English, Biology and History between the experimental and the control groups, t-tests were used to test the following hypotheses:

- * Pupils who are exposed to a reading programme at matric level achieve better results in English as a second language than pupils who are not exposed to a reading programme at matric level.
- * Pupils who are exposed to a reading programme at matric level also achieve better results in other subjects than pupils who are not exposed to a reading programme at matric level.

6.4 Results and conclusions

The experimental group showed an improvement in academic achievement after the application of the programme while the control group showed little improvement in the academic achievement after the application of the programme, to an extent that in one case, that is the subject English, the control group showed a negative improvement. This proves that strategies taught to pupils in the experimental group were more effective than the traditional way of reading of the control group.

It was found that the improvement in academic achievement in English between the experimental group and the control group differed. The results indicated that the improvement in academic achievement of the experimental group in English was more than the improvement in academic achievement of the control group in English. This improvement can be attributed to the teaching of reading strategies which the experimental group were exposed to but not the control group.

It was also found that there were significant differences in the improvement in the academic achievement of the experimental group and the control group in Biology and History. It was deduced that the post-tests differences in academic achievement were greater than the pre-tests differences in Biology and History. The experimental group's improvement in achievement in Biology and History was better than the control group's improvement. This improvement may be attributed to the reading programme which the experimental group was exposed to. It means that the pupils who were exposed to a particular reading programme attained better results in Biology and History than the pupils who were not exposed to the particular reading programme.

6.5 Implications and recommendations

In this investigation it was found that the reading ability of matric pupils, as operationalized in this study, improved their achievement in English as a second language and other subjects. The following relevant implications and recommendations are found can be made from this investigation:

- * Improved reading ability in English accounts for an improvement in academic achievement in English, History and Biology taught through English as a medium of instruction. Pupils in Black schools should therefore be taught reading strategies so that they can improve their reading ability in English and their academic achievement in English, Biology and History.
- * In teaching pupils some reading strategies, it has been found that their reading ability increases. Pupils should be taught reading strategies right from the time they start school so that:

by the time they reach matric they should have a good reading ability.

- * Reading strategies should be made part of the syllabus in schools.

6.6 Short-comings of the research

The investigation revealed the following short-comings:

- * The pre-tests and post-tests were not exactly of the same type, because the post-tests were based on the short passages while the pre-tests were based on material studied during the first semester.
- * The experimental group and the control group were not exactly equal.
- * The investigator was still a novice in the teaching of the reading strategies.
- * The period for teaching reading strategies was short and a follow-up investigation is necessary to determine if the effect of the reading programme was permanent.

6.7 Possibilities for further research

The following possibilities for further research would follow from this investigation.

- * A longitudinal study should be made to determine whether pupils keep on using reading strategies after the application of a reading programme.
- * The influence of the training of teachers in the teaching of reading strategies on the academic achievement of pupils should be investigated.

- * The results of this investigation should be compared with investigations done with younger children.

6.8 Concluding remark

In this investigation it was found that most pupils do not perform well at matric as a result of a low reading ability in English as a second language. The most important finding of this investigation was that pupils can improve their academic achievement if their reading ability is improved by teaching them reading strategies. The general conclusion arrived at was that there is a positive relationship between reading ability and academic achievement in English as a second language and other subjects at matric level. In the light of the present problems in Black education with respect to the underachievement of pupils, the results of this investigation can play a role in the solution of some of the problems in education in Bophuthatswana.

BIBLIOGRAPHY

- ALLEN, E.D. & VALETTE, R.M. 1972. Classroom techniques, foreign language and English as a second language. New York : Hartcourt Brace Javanovich.
- ANSTEY, M.M. & FREEBODY, P. 1978. The effects of various pre-reading activities on children's literal and inferential comprehension. Reading psychology : an international quarterly, 8(3) : 189-207.
- BARNETT, M.A. 1988. Teaching reading strategies : how methodology affects language course evaluation. The modern language journal, 21(2) : 151-161.
- BECK, I.L. & CARPENTER, P. 1986. Cognitive approaches to understanding reading. Journal of american psychology, 41(66) : 17-86.
- BEHR, A.L. 1988. An educational psychology for schools in Africa. Durban : Butterworth.
- BEHR, A.L. 1983. Empirical research methods for human sciences. Durban : Butterworth.
- BIEHLER, R.F. & HUDSON, L.M. 1986. Developmental Psychology : an introduction. Boston : Houghton Mifflin company.
- BOND, G.L. & JINKER, M.A. 1975. Reading difficulties - their diagnosis and correction. New York : Appleton - Century.
- BONDY, E. 1984. Thinking about thinking. Childhood education, 4 : 234-247.
- BROWN, F.J. 1984. The psychology and teaching of reading. 5th ed. Edinburgh : Oliver & Boyd.
- BUTCHER, H.J. 1977. Human intelligence : its nature and assessment. New York : Longman.
- BYRNE, D. 1976. Teaching oral English. Hong Kong : Longman.

- CARRELL, P.L., PHARIS, B.G. & LIBERTO, J.C. 1989. Metacognitive strategy training for ESL reading. TESOL quarterly, 23(4) : 647-678.
- CLIFFORD, M.M. 1981. Practicing educational psychology. Boston : Houghton Mifflin company.
- DE BETTENCOURT, L.U. 1987. Strategy training: a need for clarification. Exceptional children, 54(1) : 24-30.
- DERRY, S.J. & MURPHY, D.A. 1986. Designing Systems that train learning ability : from theory to practice. Review of educational research. 56(1) : 1-39).
- DUFFEL-MEYER, F.A. & BAUM, D.D. 1987. Reading comprehension: instruction vs. practice. Academic therapy, 23(1) : 53-59.
- DWECK, C.A. 1986. The psychology and teaching of reading. Journal of experimental psychology, 21(2) : 1001-1050.
- EDU. 1973. Educational psychology: a contemporary view. Delmar: CRM books.
- ENCYCLOPEDIA OF PSYCHOLOGY. 1982 (4).
- GAGNÉ, R.M. 1977. The conditions of learning. 3rd ed. New York: Holt, Rinehart and Winston.
- GAGNÉ, R.M. 1985. The conditions of learning. 4th ed. New York : Holt, Reinehart and Winston.
- GAROFOLO, J. 1987. Developing metacognition for school mathematics. The educational digest, 3(4) : 176-184.
- GARNER, R. 1987. Metacognition and reading comprehension. Norwood: Ablex Publishing Corporation.
- GAY, L.R. 1981. Education and research : competencies for analysis and application. 2nd ed. Columbus : Merrill Publishing Company.

GOLDMAN, S.R. 1976. Reading skill and the minimum distance principle: comparison of listening and reading comprehension. Journal of experimental child psychology, 22 : 123-142.

GUFFETTI, B.J. 1984. The reading process in content field: psychological investigation. American educational research journal, 21(1) 659-667.

GUTHRIE, J.T. & KIRSCH, I.S. 1987. Distinction between reading comprehension and locating information in text. Journal of educational psychology, 79(3) : 220-228.

HAFNER, L.E. 1967. Improving reading in middle and secondary schools. 2nd ed. New York : MacMillan.

HARMER, J. 1983. The practice of English language teaching. London: Longman.

HUBBARD, P. 1983. A training course for TEFL. Hong Kong : Oxford University Press.

JACOBS, J.E. & PARIS, S.G. 1987. Children's metacognition about reading: issues in definition measurement, and instruction. Educational psychologist, 23(3 & 4) : 255-278.

JOHNSON, M.K. & HASHER, L. 1987. Human learning and memory. Reading psychology, 38 : 631-668.

KAGAN, J. & LANG, C. 1978. Psychology and education: an introduction. New York: Hartcourt Brace Jovanovich.

KEEFE, J.W. 1986. Learning styles : theory and practice. Reston : Longman.

KENNEDY, E.C. 1974. Methods in teaching development reading. Ataxa : F.E. Peacock.

KIRBY, J.R. 1984. Strategies and Processes. (In Kirby, J.R., ed. Cognitive strategies and educational performance. Orlando : Academic press. p.3-11).

KLAUER, K.J. 1988. Teaching for learning-to-learn: a critical appraisal with some proposals. Instructional science, 17(4) : 351-367.

KLAUSMEIER, H.J. & GOODWIN, W. 1971. Learning and human abilities : educational psychology. 4th ed. New York : Harper and Row Publishers.

LEFTON, L.A. 1985. Psychology. Boston : Allen and Bacon.

LEWIN, J.R. & ALLEN, V.L. 1976. Cognitive learning in children : theories and strategies. New York : Academic Press.

LONGMAN DICTIONARY OF CONTEMPORARY ENGLISH : the up to date learning dictionary. 1986. Longman.

LUNDBERG, M.A. 1987. Metacognitive aspects of reading comprehension: studying understanding in legal cases analysis. Reading research quarterly, 5(22): 407-432.

MAHLANGU, D.M.D. 1982. The influence of reading ability in English on the scholastic achievement of Tshonga children. Pretoria. (Thesis (D.Ed.) - UNISA).

MAYER, R.E. 1989. Models of understanding. Review of educational research, 59(1) : 43-64.

MAWASHA, A.L. 1976. The teaching of English as a second language in North-Sotho speaking children for oral communication : an empirical study. Pretoria. (Thesis (D.Ed.) - UNISA).

MCKEACHIE, W.J., PINTRICH, P.R., LIN, Y. & SMITH, D.A.F. 1986. Teaching and learning in the college classroom. A review of the research literature, 1(13) : 22-33.

MCNEIL, J.O. 1987. Reading comprehension : new directions for classroom practice. London : Scott, Foreman.

MILLER, P.H. 1983. Theories of developmental psychology. San Francisco : W.H. Freedman.

- MONTEITH, J.L. de K. 1988. Metacognition. Unpublished paper. Potchefstroom : PU for CHE.
- MORGAN, C.T., KING, R.A. & ROBINSON, N.M. 1986. Introduction to psychology. 7th ed. New York : Mc Graw-Hill.
- MOSENTHAL, P.B. 1985. Defining reading. The reading teacher, 39(1) : 110-197.
- MOSENTHAL, P.B. 1988. Understanding meaning in reading. The reading teacher, 39(1) : 66-78.
- MOSENTHAL, P.B. 1988. Understanding meaning in reading. The reading teacher, 39(1) : 14-44.
- NEISSER, U. 1967. Cultural and cognitive discontinuity: an anthropological society of Washington. Washington D.C. : Longman.
- OGUNDIPE, P.A. & TREGIDGO, P.S. 1972. Practical English : a comprehensive secondary course (5). London : Longman.
- PALINCSAR, A.S. 1986. Metacognitive strategy instruction. Exceptional children, 53(2) : 118-124.
- PASK, G. 1988. Learning strategies, teaching strategies, and learning styles. (In Schmeck, R.R. ed. Learning strategies and learning styles. New York : Plenum press. p.33-100).
- PARIS, J.G. & WINOGRAD, P. 1989. How metacognition can promote academic learning and instruction. Unpublished paper. Hillsdale.
- PEARSON, P.O. 1984. Handbook of reading research. New York : Longman.
- PERFETTI, C.A. 1982. Reading ability. New York : Oxford University.
- PHYE, G.D. & ANDRE, T. 1986. Cognition, learning, and education. (In. Phye, G.D. & Andre, T. ed. Cognitive classroom learning. Orlando : Academic press. p.1-18).

QUEK, V. 1972. Comprehensive English (4). Singapore : McGraw-Hill.

RAHMAN, T. & BISANZ, G.L. 1986. Reading ability and use of a story schema in recall and reconstructing information. Journal of educational psychology, 78(5) : 323-332.

SAHU, P. and DEVI, S. 1984. Comprehension and reading. New York : Longman.

SEIFERT, K. 1983. Educational psychology. Boston : Houghton Mifflin company.

SCHMECK, R.R. 1988. Strategies and styles of learning : an intergration of learning perspectives. (In Schmeck, R.R., ed. Learning strategies and learning styles. New York : Plenum press. p.3-17).

SCOTT-JONES, D. 1984. Family influences on cognitive development and school achievement. Review of research in education, 17 : 259-306.

SMITH, C.B. 1978. Teaching reading in secondary school content subjects. New York : Holt, Rinehart & Winston.

SMITH, F. 1975. Comprehension and learning : a conceptual framework for teachers. New York : Holt, Rinehart & Winston.

SMITH, S. 1978. Understanding reading : a psycholinguistic analysis of reading and learning to read. 2nd ed. New York : Holt, Rinehart & Winston.

SNODGRASS, T.G., BERGER, G.L. & HAYDON, M. 1985. Human experimental psychology. New York : Oxford University Press.

SNOWMAN, J. 1986. Learning tactics and strategies. (In Phye, G.D. & Andre, T. ed. Cognitive classroom learning. Orlando : Academic press. p.243-270).

SOUTHGATE, R. 1979. How to teach reading. London : Addison Wesley.

SPIRO, R.J. 1980. Theoretical issues in reading comprehension. Hillsdale : Lawrence Erlbaum.

STERNBERG, R.J. 1985a. General intellectual ability. (In Sternberg, R.J.,

- ed. Human abilities : an information processing approach. New York. W.H. Freeman. p.5-29).
- STERNBERG, R.J. 1985b. What is an information - processing approach to human abilities? (In Sternberg, R.J., Human abilities : an information processing approach. New York : W.H. Freeman. p.1-4).
- STEWART, O. & TEI, E. 1983. Some implications of metacognition for reading instruction. Journal of reading, 27 : 323-332.
- STUBBS, M. 1983. Language, school and classroom. 2nd ed. London Methuen & Company.
- THOMAS, J.W. & ROHWER, W.D. (jr). 1988. Academic studying : the role of learning strategies. Educational psychologist, 21(1 & 2) : 19-41.
- TRAVERS, R.M.W. 1982. Essentials of learning : the new cognitive learning for students of education. 5th ed. New York : MacMillan.
- VREY, J.D. 1979. The self-actualizing educand. 3rd Impression. Pretoria : Unisa.
- WEISTEIN, C.E. 1987. Learning strategies. Journal of reading, 30(7) : 590-595.
- WEINSTEIN, C.E., GOETZ, E.T., & ALEXANDER, P.A. 1988. Learning and study strategies : issues in assessment instruction, and evaluation. New York : Academic Press.
- WENDEN, A.L. 1989. Metacognition : an expanded view on the cognitive abilities of L2 learners. Applied linguistics, 7(2) : 573-597.
- WENTZEL, J. & MAHLANGU, D.M.D. 1985. Empirical education. Pretoria : HAUM Publishers.
- WIERSMA, W.M. 1986. Experimental psychology. New York : MacMillan Company.
- WILLIAMS, S.M. & SILVA, P.A. 1985. Some factors associated with reading

ability : a longitudinal study. Educational research, 27(3) : 159-167.

WILSON, R.M. & GAMBRELL, L.B. 1988. Reading comprehension in the elementary schools: a teacher's practical guide. Boston : Allyn & Bacon.

WINOGRAD, P. & NIQUETTE, G. 1989. Assessing learned helplessness in poor readers. Unpublished paper.

WINOGRAD, P. & SMITH, L. 1986. Improving the climate for reading comprehension instruction. The reading teacher, 1 : 1-6.

CONSULTED WORKS

ALLEN, E.D. & VALETTE, R.M. 1972. Classroom techniques, foreign language and English as a second language. New York : Hartcourt Brace Javanovich.

BEHR, A.L. 1983. Empirical research methods for human sciences. Durban : Butterworth.

GARNER, R. 1987. Metacognition and reading comprehension. Norwood: Ablex Publishing Corporation.

GAY, L.R. 1981. Education and research : competencies for analysis and application. 2nd ed. Columbus : Merrill Publishing Company.

GUFFETTI, B.J. 1984. The reading process in content field: psychological investigation. American educational research journal, 21(1) 659-667.

GUTHRIE, J.T. & KIRSCH, I.S. 1987. Distinction between reading comprehension and locating information in text. Journal of educational psychology, 79(3) : 220-228.

HARMER, J. 1983. The practice of English language teaching. London: Longman.

HUBBARD, P. 1983. A training course for TEFL. Hong King : Oxford University Press.

JOHNSON, M.K. & HASHER, L. 1987. Human learning and memory. Reading psychology, 38 : 631-668.

WEISTEIN, C.E. 1987. Learning strategies. Journal of reading, 30(7) : 590-595.

WIERMA, W.M. 1986. Experimental psychology. New York : MacMillan Company.

WINOGRAD, P. & SMITH, L. 1986. Improving the climate for reading comprehension instruction. The reading teacher, 1 : 1-6.

APPENDIX 1

POST TEST ENGLISH

Read this passage and answer the questions that follow:

Yet the next moment there seemed to be some evidence that ghosts had a more condescending disposition than Mr Macey attributed to them; for the pale thin figure of Silas Marner was suddenly seen standing in the warm light, uttering no word, but looking round at the company with his strange unearthly eyes. The long pipes gave a simultaneous movement, like the antennae of startled insects, and every man present, not excepting even the sceptical farrier, had an impression that he saw not Silas Marner in the flesh, but an apparition; for the door by which Silas had entered was hidden by the highscreened seats, and no one had noticed his approach. Mr Macey, sitting a long way off the ghost, might be supposed to have felt an argumentative triumph, which would tend to neutralize his share of the general alarm. Had he not always said that when Silas Marner was in that strange trance of his, his soul went loose from his body? Here was the demonstration : nevertheless, on the whole, he would have been as well contented without it. For a few moments there was a dead silence, Marner's want of breath and agitation not allowing him to speak. The landlord, under the habitual sense that he was bound to keep his house open to all company, and confident in the protection of his unbroken neutrality, at last took on himself the task of adjuring the ghost.

'Master Marner,' he said, in a conciliatory tone, 'what's lacking to you? What's your business here?'

'Robbed!' said Silas, gaspingly. 'I've been robbed!'

1 Explain the meanings of the following terms:

- a warm light
- b unearthly eyes
- c dead silence
- d habitual sense

e notice. (10)

2 Construct a sentence with each of the following words, unchanged in spelling, in a part of speech from that used in the passage:

a evidence

b movement

c impression

d company

e protection. (10)

3 Give the meaning of the following words as they are used in the above passage.

a evidence

b movement

c impression

d company

e protection. (10)

4 Construct a suitable topic for this passage. (6)

5 Who seemed to be the ghost in the passage? (2)

6 How many people did notice Silas Marner approaching? (2)

7 Using the information from the passage, give a short summary of what happened.

YOUR answer should not exceed 500 words. (10)

APPENDIX 2

POST TEST BIOLOGY

Read this passage and answer the questions that follow:

Incoming light passes through the cornea, aqueous humour, lens, vitreous humour and several layers of cells in the retina before it reaches the light-sensitive retinal cells. It is interesting to note that it has been brought into sharp focus on the yellow spot by the action of the cornea (which in distant vision actually accounts for most of the refractive properties of the eye), the lens and the aqueous and vitreous humours.

The rods and cones both contain pigments, namely iodopsin (cones) and rhodopsin or visual purple (rods). The incoming light causes a break-up or splitting of the photochemical pigment, which in turn gives rise to an impulse in the attached optic nerve neuron. The impulse (or impulses) pass(es) via the optic nerve to the visual cortex of the cerebrum, situated at the back of the hemispheres. Here it is interpreted by the brain in terms of the impulses, giving rise to the sensation of sight.

To prevent excessive illumination and possible damage to the retina, the amount of incoming light is controlled by the iris. This causes the pupil to constrict in bright light and vice versa.

To obtain a sharp, clear image, the rays of light from an object must be focused onto the retina. Light rays from objects more than 6 m from the lens (in the optic sense, distant objects) can be focused onto the retina by the normal eye. However, if the object is less than 6 m from the lens (near object), the curvature of the lens must alter : the lens must become thicker and shorter for a clear focus to be achieved. This is known as accommodation and it comes about in the following way.

- (a) The ciliary muscle contracts.
- (b) The ring of circular muscle's diameter decreases.
- (c) This means that the ciliary body moves closer to the lens.
- (d) The tension on the suspensory ligaments slackens.

- (e) The elastic lens bulges as a result.
- (f) The rays of light are bent or refracted by the thicker lens.
- (g) A sharp focus of the image is achieved on the retina.

1 Explain the meaning of the following terms;

- A. reach
- B. account
- C. aqueous
- D. achieve
- E. contact (10)

2 Construct a sentence with each of the following words, unchanged in spelling, in a part of speech different from that used in the passage.

- A. incoming
- B. interpreted
- C. courses
- D. focused
- E. slackens (10)

3 Give the meanings of the following words as they are used in the above passage:

- A. incoming
- B. interpreted
- C. courses
- D. focused
- E. slackens (10)

4 How is it possible that damage to the retina can be prevented? (2)

5 What is accommodation according to this passage? (2)

6 Using the information from the passage, give a short summary of the functioning of the eye. Your answer should not exceed 500 words. (10)

7 Construct a suitable title for this passage. (6)

APPENDIX 3

POST TEST HISTORY

Read this passage and answer the questions that follow:

E. AFRICA NORTH OF THE ZAMBEZI

Read through the extract "An Address given by Mr H. MacMillan to both Houses of Parliament of the Union of South Africa, February 1960" and answer the following questions:

"Ever since the break up of the Roman Empire one of the constant facts of political life in Europe has been the emergency of independent nations. (1.a) They have come into existence over the centuries in different forms, with different kinds of government, but all have been inspired by a deep, keen feeling of nationalism (1.b) which has grown as the nations have grown. In the 20th century and especially since the Second World War the processes which have given birth to the national states of Europe have been repeated all over the world. (2) We have seen the awakening of national consciousness (3) in peoples who have for centuries lived in dependence upon some other power. Fifteen years ago this movement spread through Asia ... Today the same thing is happening in Africa and the most striking of all impressions I have formed is of the strength of this African national consciousness. (4) In different places it takes different forms, but it is happening everywhere. The wind of change is blowing through this continent and whether we like it or not, this growth of national consciousness is a political fact that we must accept and take account of." (5)

1 What do you understand by:

- a. independent nations
- b. nationalism
- c. consciousness
- d. wind of change

- e. political life (10)
- 2 Give the meanings of the following words as they are used in the above passage:
- a. independent nations
b. nationalism
c. consciousness
d. wind of change
e. political life (10)
- 3 What major event in the 20th century stimulated nationalism? (2)
- 4 Comment on: "Today the same thing is happening in Africa." (4)
- 5 What position was held by Mr. MacMillan when he gave this speech? (2)
- 6 In what year did the "wind of change" reach full force? (2)
- 7 a. Define the word empire (2)
b. What do you understand by the word war (2)
c. Which movement spread through Asia (2)
d. What impression did the author form? (4)
- 8 Give a short summary of this extract. Your answer should not exceed 500 words. (10)

APPENDIX 4

TRAINING PASSAGE

Life Histories

'Menelik, who reigned as Emperor of Ethiopia from 1889 to 1913, was perhaps the greatest of Ethiopia's rulers. His reign was of considerable importance in that it witnessed the reunification and modernisation of his country, as well as a great increase in its position in world affairs.

'Ethiopia, though a powerful state in ancient and medieval times, had in the middle of the eighteenth century fallen on evil days. The powers of the monarchs had been usurped by the feudal lords and centralised government had been replaced by the autonomy of the various provinces whose rulers warred among themselves.

'The reorganisation and resurrection of the ancient State had first been attempted in the middle of the nineteenth century by the Emperor Theodore and had later been partially accomplished by his successor, the Emperor Johannes IV. It was, however, left to Menelik to bring this work to fruition, as well as to withstand the pressure of the European Powers in the Scramble for Africa, and to lay the foundations of a modern State.

'Menelik's personality, his innate intelligence and ability, his grasp of world affairs and his interest in modernisation, impressed all observers. "During the many interviews I had with him," recalls the British diplomat, Rennell Rodd, "I formed a high opinion of both his intelligence and his character. His energy was astonishing. By rising before dawn and beginning his day with prayers in chapel at 6.00 a.m. he made time to attend personally to every detail of the administration in a country constituted of many heterogeneous elements.

Accessible to all his subjects from the highest to the lowest, he had succeeded in winning universal regard and affection." Other observers tell a similar tale. Thus the French traveller, Vanderheyem, noted that Menelik got up early and was constantly occupied with one project or another and might be

seen inspecting, for example, the mechanical saws, the water system, the repair of artillery or guns, the making of mule collars or shields or the planting out of vegetables from newly imported seeds. The sovereign's physician, Dr. Merab, confirms this picture, adding that Menelik embodied law and order in his person and guaranteed justice to all, being called the "father of his people" by all his country's numerous tribunes.

'The homely yet impressive character of the monarch must also be emphasised. He was always willing to participate in manual work of any kind and wished to give dignity to occupations traditionally regarded as inferior. Vanderheyem records that it was by no means unusual for this remarkable sovereign to get off his mule and set an example by himself taking part in any work which was in hand. Another writer relates that Menelik often assisted in such varied work as church building and grass cutting. It was not therefore surprising that the Emperor should have issued a decree castigating his people for their traditional dislike of manual work, and declaring the farmer more important than the king. "All mankind," it added, "is descended from Adam and Eve; there was no other ancestor. Discrimination is the result of ignorance. God said to Adam: 'In the sweat of thy brow shalt thou eat bread!' If we do not carry out this injunction and everyone is idle there will be neither government nor country."

This passage is typical of many biographies of great men. They are written not only to be of interest to readers, but, more important still, to serve as a source of enlightenment of inspiration to others. Whatever progress the human race has made, has been in a large measure the result of the deliberate efforts of great men - the reformers, the nation builders, the creative men, the seekers after knowledge - the long line of men, and women, of all races, who have produced the difference between the world of Early Man and the world we know today. These people did not set out to be great - truly great people don't. They are great as a result of some inner drive, of their unflinching pursuit of an idea, an ideal, an outstanding achievement....

The greatness of Menelik II, as can be gathered from the passage quoted, is generally accepted. But many great people are controversial figures, seen from different sides by different people. Even after their death it is in some cases difficult for people to agree on the subject of their greatness, and these controversies have outlived some men by scores or even hundreds of

years, kept alive by biographers and historians. Such differences of opinion are natural, and quite understandable. But some people make the mistake of confusing greatness with perfection. If only those who were without any human weaknesses were to be considered great, the list of the world's great men and women would dwindle almost to vanishing point - perhaps not even acknowledged saints would survive on it!

The next seven passages are about people who are great in their own different ways, in various walks of life, having achieved distinction under various conditions and handicaps, but all worthy of admiration for some truly great quality.

- 1 Who held most of the power in Ethiopia in the middle of the eighteenth century?
- 2 What else did Menelik II do for Ethiopia besides completing the work of his predecessors?
- 3 What made the administration of the country difficult?
- 4 Though not a democrat in the modern sense, Menelik II had certain democratic qualities. What evidence can you find for this in the passage?
- 5 What is the main purpose of most biographies according to the passage?
- 6 What is meant by saying that biographers and historians may keep a controversy about a great man alive years after his death?
- 7 The last sentence of the penultimate paragraph is only another way of saying: (a) People can be great without being morally perfect. (b) To be great a man must have human weaknesses. (c) Saints are not on the list of the world's great people. (d) There are not saints in the world today. (Choose one.).
- 8 Summarise the first four paragraphs in three short sentences (one sentence for paragraphs 1-2).

APPENDIX 5

Training passage

DISCOVERY OF PENICILLIN

Fleming discovered penicillin in a way which seems very easy. One day, he noticed by chance that the colonies of a germ called staphylococcus around a mould, which had grown on one of his culture plates, were fading away. He realized immediately that the mould was producing a substance which was killing the germs and he began to experiment with the mould. He found that besides staphylococcus, the substance could kill many other dangerous germs which invade the human body and cause serious and often deadly diseases. Fleming again carried out experiments to test a most crucial quality of the substance: whether it had any ill effects on man and animals. His tests showed that the substance was perfectly harmless and could therefore be used to treat infections. Fleming named the miraculous substance "penicillin", from *Penicillium notatum*, the name of the mould which produced it.

Many scientists had seen, before Fleming, the lysis (disintegration) of microbes near a mould. Why is it that they had not been able to grasp the right implications as Fleming did? Fleming had the real naturalist's capacity for observation, and the scientific imagination to see the implications of the observed fact. Furthermore, Flemming's mind had been made sensitively alert to any unusual developments in the specimens he had set up by several years of intensive research into disease-causing bacteria. While working on the subject of combating bacterial infection, he had tried to use one microbe-killing substance after another, and had carefully compared the toxicity of the substances to the microbial cells with their toxicity to the human ones. The results had always been disheartening till now. All the substances he had used before had destroyed the human cells together with the microbial cells. This was only to be expected since a substance that was poisonous enough to kill certain living cells would not leave others, no less resistant, unharmed.

Fleming's theory was that a substance with the properties that he later found in penicillin, did exist. The other scientists were not too ready to accept

any new theory or innovation. They had to have concrete proof. Fleming's mind, however, was open to anything new. Besides that, he always used his previous experience to advantage. When he discovered penicillin, he put it through all the tests he had so carefully devised over the years to study the qualities required of a substance to be used safely in the blood-stream. Penicillin passed them all - the first substance ever to do so. Fleming was overjoyed.

At last, he had discovered the miraculous substance he had been seeking for so many years. However, several more years were to elapse before penicillin could be used. To be used, the active substance had to be extracted and purified. This, at that time, was a difficult chemical process. Besides, it was not a process that Fleming could carry out himself: he was no chemist. For ten years Fleming tried to interest one chemist after another in the extraction of penicillin. One or two tried but failed - others were either not convinced or too busy with their own work. At last, in 1939, two brilliant Oxford chemists, Chain and Florey succeeded in extracting and purifying penicillin. In its pure crystalline form, penicillin justified Fleming's wildest dreams because it was many times more powerful than the crude substance diluted in broth that he had been using. Elaborate experimentation by the Oxford team, which took over two years to complete, proved also that this drug in its purified state did no more harm to human cells than the crude penicillin Fleming had discovered. And it proved to be most effective, saving many lives during the later stages of the War.

SECTION A: COMPREHENSION

1 Answer the following questions.

- (a) Using only the information from paragraph 1, describe how Fleming discovered penicillin. Your answer should not exceed 50 words.
- (b) What tests had to be carried out before penicillin could be used on human beings?
- (c) What is the difference between the crude and the purified form of penicillin?
- (d) In not more than 60 words, show how Fleming worked on his discovery. Use material from paragraph 2 only.

- 2 (a) Explain the meaning of each of the following terms.
- | | |
|--------------------------|------------------------------------|
| (i) culture plates (1.3) | (v) toxicity (1.24) |
| (ii) experiment (1.5) | (vi) microbial cells (1.25) |
| (iii) infections (1.12) | (vii) pure crystalline form (1.50) |
| (iv) specimens (1.21) | (viii) diluted (1.52) |
- (b) For each of the following expressions give another word or short phrase which could be used to replace it in the passage.
- | | |
|-------------------------------------|--------------------------------------|
| (i) fading away (1.4) | (vi) intensive research (1.21) |
| (ii) crucial (1.9) | (vii) disheartening (1.26) |
| (iii) miraculous (1.12) | (viii) resistant (1.30) |
| (iv) implications (1.17) | (ix) innovation (1.33) |
| (v) capacity for observation (1.18) | (x) elaborate experimentation (1.52) |
- 3 (a) Construct a sentence with each of the following words, unchanged in spelling, in a part of speech different from that used in the first paragraph of the passage.
- | | |
|------------------|-------------------|
| (i) chance (1.2) | (iii) cause (1.8) |
| (ii) mould (1.3) | (iv) treat (1.12) |
- (b) Use each of the following words in 2 metaphorical expressions of your own.
- | | |
|-------------|------------|
| (i) easy | (iii) pure |
| (ii) active | (iv) crude |
- 4 Rewrite each of the following expressions without using the words in bold print. (You may alter the wording in any way you like but you must not change the meaning of the phrase.)
- | |
|--|
| (i) dangerous germs which invade the human body |
| (ii) of combating bacterial infection |
| (iii) Fleming's mind was open to |
| (iv) used his previous experience to advantage |
| (v) justified Fleming's wildest dreams |

APPENDIX 6

Training passage

UNITY IN AFRICA

As more and more African states have achieved independence, their leaders have given considerable thought to African unity. The following article appeared in the magazine West Africa in 1965. The author, Chief Simeon Adebo, surveys the progress towards unity that had been achieved up to that date.

The most important and dramatic change that has taken place in Africa or in Africa's position in the world in the last two and a half years has been the establishment of an Organisation of African Unity.

Africa is divided into too many countries. A few are reasonably big. Many are unreasonably small, either in area or in population or in both. While, on the one hand, we have countries like Algeria and Congo (Leopoldville) each with areas exceeding 000,000 square miles, and a country like my own (Nigeria) with a population of over 55 million, we have, on the other hand, a country like The Gambia with an area around 4,000 square miles and a population of just over 300,000. The entire population of Africa is not one half that of the Republic of China.

One of our problems, therefore, has been proliferation of states. Some feel that the old metropolitan countries, who carved up Africa for their own purposes, were responsible for this. I am sure they are responsible for the arbitrary division of the continent, resulting here and there in an ethnic group being cut in two, one portion forming part of one country and the other part of another. But I am not sure they are solely responsible for proliferation itself. Certainly, in the case of Nigeria, our people were in numerous tribal groups before the advent of the colonial power. If these groups had developed into independent entities, we should have today not a smaller but a greater number of independent countries in Africa. It is of course possible that left to ourselves, the normal incidence of affinity, trade, and the need to combine for security, would have had upon our peoples

the effect they had upon small ethnic groups elsewhere, so that we would on the whole be less fragmented than we are today. Who can tell?

In any case, the old colonial powers cannot altogether be exonerated from responsibility in this matter. Even where they were not responsible for the original divisions, they could have done better in helping to 'abate the nuisance'. Here again, Nigeria is a case in point. In order to facilitate their administration of the territories, the British secured the amalgamation of the different parts of Nigeria in one single country. Even when in 1953 a violent conflict between the Northern and Southern leaders threatened a break-up of the country, the British Government co-operated to effect a compromise settlement that enabled Nigeria to remain intact. It seems a pity that things did not develop in this way in all parts of our continent.

But if Africa was left divided by the metropolitan powers, Africa itself very quickly created a further division within itself, a division in another dimension. By 1962 the independent countries of Africa were divided into three camps or, more accurately, two and a half. There was a Casablanca bloc of powers, there was a Monrovia bloc, and there was within the Monrovia bloc a French-speaking sub-group commonly referred to as the UAM. These groupings each reflected a desire for inter-African co-operation, which was something to be commended, but the creation of more than one group reflected a new danger within Africa.

Therefore, what was born in Addis Ababa in May, 1963, or rather, what came to fruition there, was not a recognition of the need for inter-African co-operation but the recognition that co-operation would best be promoted on a continental scale through a single organisation.

The creation of this Organisation was not easy. Many outside Africa who had never liked the African independence movement hoped that it would never happen. Even among our overseas friends who wished us well there were a great many who did not see how it could be accomplished, having regard to what they thought were deep-seated differences of opinion between the Casablanca Group and the Monrovia Group - even on the fundamental question of the form that African unity should assume. Within Africa itself, there was no lack of sceptics.

However, despite the apprehensions of the doubters, the deed was done. On May

25, 1963, in the great city of Addis Ababa, capital of the ancient-and-modern Kingdom of Ethiopia, the Organisation of African Unity was born. Its Charter, to which the Heads of African States and Governments there assembled appended their signatures, was a remarkable document. It set out with great clarity the purposes of the Organisation, the manner in which those purposes were to be implemented, the principles for the pursuit of them, and the institutional machinery to be employed.

Naturally the first purpose of the Organisation is the promotion of the 'unity and solidarity of the African States'; the co-ordination and intensification of efforts to achieve a better life for the peoples of Africa; the defence of their sovereignty, their territorial integrity and independence; and the eradication of colonialism from the continent.

But that was not all that OAU was created to do. The African leaders assembled in Addis Ababa were not out to promote an isolationist Africa. Their aim was a strong, stable and prosperous continent in a just and co-operative world. It was therefore underlined in the OAU Charter that one of its purposes was 'to promote international co-operation, having due regard to the Charter of the United Nations and the Universal Declaration of Human Rights'.

Thus, from the onset of its establishment, OAU demonstrated that it was going to concern itself not only with the urgent problem of Africa, but also with inter-national problems of general concern.

- 1 State explicitly the point the writer wishes to imply by comparing the population of Africa with that of China.
- 2 What do you understand the writer to mean by the old metropolitan countries (16)?
- 3 He blames these countries for two things. State them.
- 4 What factor independent of these countries has contributed to the proliferation of states in Africa?
- 5 According to the writer, if there had been no carving up of Africa by

the old metropolitan countries: (a) there would have been a lot more states based on Africa's innumerable ethnic groups; (b) there would have been fewer states because external factors similar to those at work elsewhere would have welded the ethnic groups together; (c) it is difficult to know now which of (a) or (b) above would have happened. (Choose one).

- 6 What sort of things does he think the metropolitan powers could have done to 'abate the nuisance'?
- 7 a new danger within Africa (59). What danger?
- 8 State in one sentence why the writer calls the establishment of the OAU the most important and dramatic change that has taken place in Africa or in Africa's position.
- 9 What was the OAU's primary aim?
- 10 What was its secondary aim?

SYNOPSIS

The black child in Bophuthatswana is faced with mastering three languages: Setswana, English and Afrikaans. English as a second language is used as the medium of instruction in black schools from standard three through secondary school and tertiary education. The black child therefore must master English as a second language in order to be a proficient reader of English and other subjects as well. Proficient reading is an essential means for performing well in English as a second language, and in other subjects where the medium of instruction is English. In a literature study it was found that pupils who are receiving their instruction through the medium of a second language encounter problems with reading and learning of the learning content. In this study an attempt was made to find out whether the improvement of reading ability in English as a second language would lead to an improvement in academic achievement in English and other subjects.

The empirical investigation was done on a sample of secondary school pupils in Bophuthatswana. A true experimental design was used where the experimental group followed a reading programme in meta-cognitive reading strategies to improve their reading ability. The control group was taught by means of a conventional method.

The experimental group showed a greater improvement in academic achievement in English and other subjects than the control group. It is concluded that special attention must be given to the improvement of the reading abilities of black pupils who use English second language as medium of instruction.

OPSOMMING

Die verband tussen leesvermoë en akademiese prestasie in Engels tweede taal en ander vakke op matriek-vlak.

Die swart kind in Bophuthatswana moet Setswana, Engels en Afrikaans bemeester. Engels as tweede taal word in swart skole vanaf standerd drie as medium van onderrig gebruik terwyl Engels by tersiêre inrigtings ook die medium van onderrig is. Daarom moet die swart kind Engels as 'n tweede taal goed baasraak om Engels goed te kan lees. 'n Goeie leesvermoë in Engels is noodsaaklik vir goeie prestasie in Engels en ander vakke waar die medium van onderrig Engels is. In die literatuurstudie is ook gevind dat kinders wat deur middel van 'n tweede taal onderrig word bepaalde probleme ondervind met die lees en leer van die leerinhoud. Daarom is daar in hierdie studie 'n poging aangewend om vas te stel of die verbetering van die leesvermoë in Engels as tweede taal sal lei tot 'n verbetering in akademiese prestasie in Engels en ander vakke.

Die empiriese ondersoek is uitgevoer op 'n steekproef van 'n populasie sekondêre skoolleerlinge in Bophuthatswana. 'n Ware eksperimentele ontwerp is gebruik waar die eksperimentele groep blootgestel is aan 'n leesprogram waar onder andere van metakognitiewe lees-strategieë gebruik gemaak is om die leerlinge se leesvermoë te verbeter. Die kontrole groep is deur middel van 'n konvensionele metode onderrig.

Daar is gevind dat die eksperimentele groep 'n groter verbetering in prestasie in Engels en ander vakke getoon het as die kontrole groep. Dit is daarom belangrik dat daar besondere aandag gegee sal word aan die verbetering van die leesvermoë van swart leerlinge wat Engels as tweede taal as medium van onderrig gebruik.