

**An Investigation of the Effect of an Intervention
Programme of Selected Comprehension Skills on Standard
6 Pupils in a Black High School.**

Submitted in partial fulfilment of the requirements
for the degree of Master of Education in the
Department of Education, University of Natal.

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University of Natal
Pietermaritzburg.

ERRATUM

The copyright holder of the " University of Natal's computer programme for assessing the readability of text " is **READABILITY CALCULATIONS** (1984). Micro Power & Light Co., Dallas. The programme, suitable for use on any I.B.M. personal computer or compatible, is commercial available.

ABSTRACT

The field of reading comprehension, the processes involved in teaching reading and the various stages of reading development are all topics which have attracted a lot of attention and research over the years. This dissertation attempts to address two aspects of reading comprehension, namely, the acquisition of the **skills of selecting keywords and topic sentences as an aid to the comprehension of text.**

The intervention programme devised owes much to the work of Vygotsky, Feuerstein, Bandura's Social Learning Theory, Sternberg's Triarchic Theory of Intelligence, Borkowski's general model of intelligence and Adams and Wallace's Thinking Actively in a Social Context (TASC) project. Fundamental to the thinking behind the approach to the programmes are Jean Chall's Stages of Reading Development and Donald's model of the interactive nature of reading problems.

Passages for the intervention programme were selected from Childcraft, an American children's encyclopaedia and matched according to the University of Natal's computer programme for assessing the readability of text. The experimental and control groups were both Std 6 classes in a Black High School and were matched according to reading background as assessed by a questionnaire, sex, age and ability in the English language as measured by tests administered by the school.

Pre- and post-tests were given and the results were compared and analysed statistically using the Man-Whitney U test. The results showed a significant improvement in the average % gained by the

experimental group. A further follow-up test was administered subsequent to the completion of the programme in the form of the writing of a summary, in an attempt to see whether transfer of the skills learned had occurred.

The overall results and the control of language shown in the summaries indicate that the intervention programme resulted in significant improvement in the pupils' ability to select keywords and topic sentences. Independent observers commented on the high motivation of the pupils and the obvious development of self-confidence.

DECLARATION

I hereby declare that this dissertation is my own work. It is being submitted in partial fulfilment of the requirements for the degree of Master of Education (Curriculum Studies) in the University of Natal, Pietermaritzburg. It has not been submitted before for any degree or examination in any other university.



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CHAPTER 1

1. INTRODUCTION

For the majority of Black children in South Africa education is not easily acquired. Not only do they face problems such as overcrowding in the classrooms, lack of physical facilities and textbooks, underqualified teachers and economic difficulties, but their secondary schooling is also carried out in a second language. In fact mother tongue education is only applicable to the end of Std 2 (4th year of schooling).

Concern has been expressed by teachers of English in Std 6 (8th year of schooling) that pupils are unable to comprehend what they read in English, even though the majority are capable of actually reading the printed work (Communications received as Advisor for In-Service Education Courses 1988-1990 and as Deputy Chief Examiner, English 1989-1990). This concern has lead the researcher to attempt to isolate two of the skills underlying comprehension of text, that is:

the selection of keywords

and

the recognition of topic sentences.

Subsequently to plan an intervention programme in which these skills are systematically mediated to the pupils to see if this would develop their comprehension of selected passages.

The area of reading comprehension and learning in a second language is one which has been well-researched in the United Kingdom and the United States of America with people such as Stephen Krashen (1981, 1982, 1983) and Jeanne Chall (1983).

Problems in reading comprehension and learning difficulties in South Africa are also receiving attention from well-known academics such as Aitchison (1980), Smith (1980,1982), Donald (1982), and Blacquiere (1989), among others. Research on reading problems has been carried out in Coloured Schools (Pitt 1985) and White Schools (De Kock 1961, Schaffer 1964). However, no evidence could be found by the writer of research done specifically in Black schools at the Std 6 level.

The work of Chall (1983) was influential in the initial planning of this particular research programme since fundamental to Black pupils' difficulties in reading comprehension, is the lack of exposure to text in the initial stages of reading. This could be attributed to a variety of factors among which are the socio-economic problems of the Black community, lack of library facilities and lack of reading material available in the Black language. Chall emphasises that if a child does not gain sufficient practice in the initial stages of reading, his/her progress may be retarded and s/he may remain a functional reader.

Added to this problem is the fact that Black pupils must change to the medium of English in Std 3 and thus face reading in another language in which they have had very little instruction. It was thus hypothesized that pupils needed to be encouraged to pay close attention to the text, in fact, to develop word for word reading, as they would do in initially learning to read, in order to select keywords and topic sentences and then, through practice in these skills, to gain a better understanding of the selected passages.

Chall (1983) states that reading practice in the initial stages should be carried out on material with content familiar to the children. This premise, however, if carried out exactly would have made the choice of passages for this research programme extremely difficult as it would have been almost impossible to find passages familiar to all the children in the classes involved. It was therefore decided to select material which was not specifically related to any particular subject taught at school and which was of a factual nature. The American children's encyclopaedia Childcraft (1989) was selected for this purpose as it has been specifically written and researched for younger readers and the language has been deliberately controlled for ease of understanding. No South African equivalent has been published to date. Permission to use material from Childcraft was obtained through Childcraft International.

The passages were chosen by the researcher and shown to three other teachers of Black Std 6 pupils for their comment and then subjected to the University of Natal's computer programme of readability of text. The passages chosen were matched as closely as possible with regard to length and level of readability.

The programme itself was designed so that conventional teaching methods would not be used, but participatory learning and interactive teaching would take place (Davidhoff and van den Berg 1990). The researcher took the part of the mediator while the pupils controlled their own pace of learning as far as was possible within the parameters of the programme. These methods were based on the work of Bandura (1971, 1977), Feuerstein (1979, 1980), Campione and Brown (1982), Vygotsky (in Bruner 1985 and Cole 1985), Sternberg (1985) and Adams and Wallace (1987, 1988, 1991).

The actual research programme was carried out in two Std 6 classes at Sukuma Comprehensive Secondary School in Pietermaritzburg, Natal with the assistance of the Principal and staff. The English class teacher acted as observer throughout the programme and her comments were invaluable in the assessment of the success of the programme.

CHAPTER 2

2.PROBLEMS IN READING COMPREHENSION.

Problems in reading comprehension in Black schools may be traced to a number of sources among which are the poor initial teaching of reading at primary level, the socio-economic background of the pupils and the lack of motivation to develop and sustain a habit of regular reading (Hawes 1979, Donald 1980, Sithole 1990, Kugel 1990).

Under the present differentiated system of education in South Africa, the majority of Black schools are poorly equipped, over-crowded and lack basic facilities such as libraries and laboratories. The average Black teacher is under-qualified for the post held and is often not as fluent in the English language as s/he would wish to be to teach through the medium of English which is the official language of Black education in Natal from Std 3 upwards (Hawes 1979, Wallace & Adams 1988).

Children are taught in the second language from a very early age, that is the fifth year of schooling and often only hear English spoken in the classroom by their teachers. Textbooks are written in English and are often the only books that the children are exposed to. Classes are usually large, averaging between 45 and 50 pupils in a class, and conditions in these classes do not encourage the reading habit. The approach to teaching is often based on rote-learning of content as this is the only way in which teachers feel they can cope with the mass of information they are expected to impart to their pupils in order for them to pass an external examination through the medium of a second language. This is often the method

by which they were taught and is therefore a comfortable one (Hawes 1979, Salia-Bao 1987, Fafunwa 1982).

Part of the African culture and tradition is respect for those in authority and this has been transposed into the teaching methods used in the classroom (Hawes 1979, Salia-Bao 1987, Wallace & Adams 1987). Children are not expected to question the teacher, but to remain silent and absorb uncritically what is taught to them. Independent thought is not encouraged. In an average Black primary school, children can be heard chanting and repeating in rhythmic fashion in unison the English lessons being taught by the teacher. The pupils seem to enjoy this method, but no questions are being asked, words are not being manipulated or used in a realistic fashion and no individual effort is being expected (Hawes 1979). Krashen (1981,1982) advocates methods of communicative teaching, using group work and the oral use of language with pupils expressing themselves freely in realistic contexts. However the reality of modern teaching methods in African schools is very different to what has been suggested by Krashen and others. The wide range of abilities and ages in the classes compounds the problem of communicative teaching. Pupils are seldom given individual attention as the classes are too large and the teachers unmotivated or untrained.

"The problems of large classes and poorly qualified teachers, many of them lacking in morale, are compounded by the lack of facilities. Whilst the state has built a number of solid school buildings around the country in recent years the general situation is still chronic. Classrooms are overcrowded, desks insufficient, playing fields inadequate, windows broken, toilets shocking, textbooks unavailable, libraries and

laboratories and the various teaching aids, used in modern education, are seldom available."

(Wilson & Ramphele 1989 p.144)

Exposure to text in all its forms is an essential part of reading comprehension in order that children become familiar with the written word and be at ease in handling a second language (Chall 1983, Donald 1980, 1982, Blacquiere 1989). Traditionally the African culture is an oral one and books tend not to be highly regarded in the home (Wilson & Ramphele 1989). The results of the questionnaire used in this research reveals that the majority of pupils used in the research programme came from homes where there were fewer than 50 books (see questionnaire results).

Most Black schools lack adequate library facilities, so the pupils are not exposed to extended reading through the school system. It must, however, be noted that the school in which the research programme was carried out has an excellent library which is utilised by almost all the pupils. The classes involved in the programme also have two library periods per week timetabled as part of the official curriculum. At the time that the research programme was carried out these pupils had been exposed to a good library for approximately 5 months and the answers to question 12 of the questionnaire revealed that all the pupils in the experimental group utilised the school library and that only 3 pupils in the control group responded that they did not make use of the school library facilities.

If children are denied access to text and reading comprehension is not adequately taught, or not taught at all (Sithole 1990), then one can expect that pupils will not be able to deal with reading comprehension passages in a systematic manner (Donald

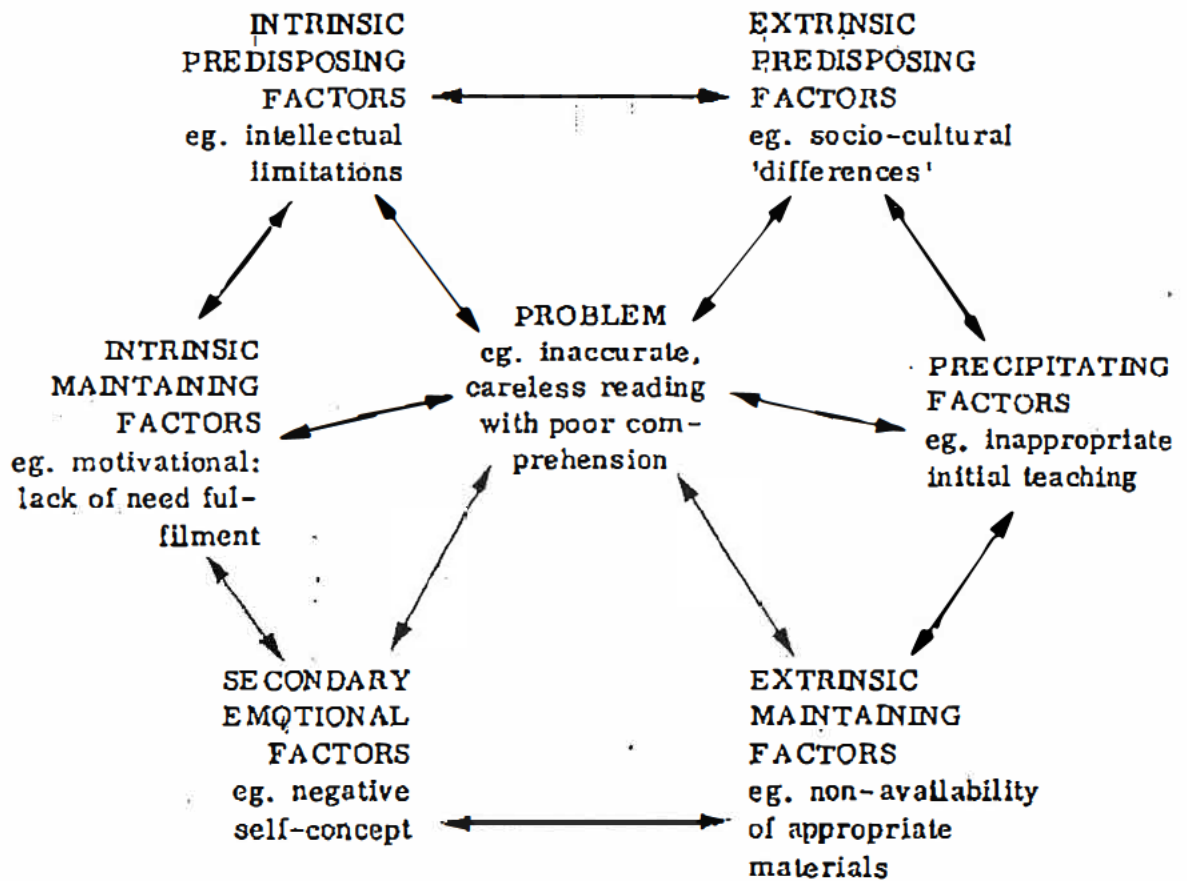
1980). According to Jean Chall (1983) pupils will remain at the Decoding Stage of reading and are reading text without fully comprehending what they are reading. They are "barking at print" and must still practise the skill of reading and be taught how to make sense of what they are reading.

An additional problem which affects the comprehension of text is that Black children are taught to read in their home language and, although English is introduced as a subject from Substandard A (the first year of schooling), there appears to be some doubt as to whether they are ever formally taught to read in English at all (Sithole 1990). What effect the transfer from reading in the mother tongue to reading in English has on the development of comprehension skills is not a topic that has been fully researched in South Africa to date.

The reading habit is not one that comes naturally to any child. The love of reading has to be encouraged by significant adults in the child's life, books must be provided which are within his/her reading ability level and which satisfy the interests of the child. The more practice a child has in reading, the easier it becomes and the quicker s/he can automatize the skills of deciphering text and begin to concentrate on comprehending and enjoying what s/he reads (Chall 1983, Aitchison 1980, Blacquiere 1989, Donald 1980, Kugel 1990, Pitt 1985, Smith 1980).

David Donald (1980) proposes a "Dynamic Model Indicating the Interaction of Possible Causative and Maintaining Factors in Problems of Reading" which is applicable to this dissertation in that it gives a global picture of the possible causes of reading comprehension problems a number of which have been briefly discussed already.

A Dynamic Model Indicating the Interaction of Possible
Causative and Maintaining Factors in Problems of Reading



(in Homo Legens, vol 1, no.1, July 1980)

As can be seen from the model, any of the factors may be the possible cause of the problem of poor reading comprehension or could compound the problem. The model also shows clearly the interactive nature of the factors. Donald's model is a dynamic one which accommodates the interaction of factors which occur in almost every problem in reading and the problem of acquiring reading comprehension skills in a second language is one which can be accommodated within it.

Problems in the process of reading are complex and there are a large number which have been identified:

"...problems which range from specific deficiencies in the cognitive sub-skills required in basic word identification; to inadequacy in the complex and wide ranging skills of comprehension; to insufficient interest or independence in reading." (Donald 1980, p.19)

The research outlined in this dissertation attempts to isolate two such comprehension skills: firstly, the skill of isolating key words in a given piece of text, and secondly, the skill of identifying the topic sentence in each paragraph as an aid to understanding the subject matter of the whole passage.

CHAPTER 3

3. READING AND READING PROCESSES.

"Reading has been subjected to a number of definitions, explanations, theories and research, and these in turn have spawned a bewildering array of methodologies. Reading has a long history of investigation, and the field is still wide open to research as its acquisition and the development of its component skills continue to baffle academics." (Pitt 1985, p. 23)

The variety of the definitions of reading can be seen in the following quotations:

"Reading is a selective process. It involves partial use of available minimal language cues selected from perceptual input on the basis of the reader's expectations. As this partial information is processed, tentative decisions are made to be confirmed, rejected, or refined as reading progresses.

More simply stated, reading is a psycholinguistic guessing game. It involves an interaction between thought and language. Efficient reading does not result from precise perception and identification of all elements, but from skill in selecting the fewest, most productive clues necessary to produce guesses which are right first time."

(Goodman 1967, p. 126)

"Building upon the notion that reading is only incidentally visual, interactive approaches emphasize that meaning is not fully present in a

text waiting to be decoded. Rather, meaning is created through the interaction of text and reader." (Silberstein 1987, p. 29)

"Reading skill is not easily acquired. Firstly, you need to be able to decode a lot of words. Yet the spelling-to-sound system is not simple. Even common words have highly variable spellings, such as of (pronounced 'ov') and was (pronounced 'woz'). There is method but there is madness. Secondly, the structure of sentences in stories varies considerably. In fact, no two sentences in a story are usually alike - next time you read the newspaper, try to find two sentences on the page which are the same. Thirdly, a story is not just the words written on the page. Writers do not mention every detail, they leave out lots of things which they expect you to fill in for yourself. In other words, when you read you, as a reader, have to do something with the words on the page, the words do not make sense by themselves." (Nicholson 1975)

"Writing is the process of presenting speech in a more permanent visual form and therefore reading can be looked upon as the reverse of this process, namely, turning the collection of symbols seen upon a piece of paper into 'talk', or, in the case of silent reading, into an image of speech sounds." (Moyle 1986/1987)

"Reading is more than seeing words clearly, more than pronouncing printed words correctly, more than recognizing the meaning of isolated words. Reading requires you to think, feel and imagine." (Strang 1972)

The acquisition of reading has been recognised as a skill which many learners find most difficult to master and many attempts have been made to find a solution to this problem. A broad outline of some of the methods of teaching reading that have been designed and implemented in schools will be discussed as a background to the way in which Black children are taught to read in South Africa.

3.1.The Phonics Approach:

In this approach language is analysed as consisting of sentences, which in turn consist of words and the words are made up of letters. The letters can be sounded out by the pupils and thus words can be formed from sounds. Typical in this approach is the learning of the alphabet and the vowel sounds in combination and hence to the sounding out of individual words. Reading is thus basically seen as a matter of translating the visual symbols of print into the auditory pattern of the spoken word, letter by letter (Pitt 1985).

The Phonics approach has been strongly criticised by people like Smith (1978) who stated that there is no one-to-one correspondence between letters and sounds. The English language is notorious for its inconsistencies in spelling and pronunciation of words as it has incorporated words from many other languages. However, the phonics approach gave rise to the very popular Initial Teaching Alphabet (I.T.A.) approach of Sir James Pitman in the 1960's in which English words were presented with special marks on letters which

"allowed for more consistent sound-to-symbol correspondence." (Molteno Project Report 1983/84, in Pitt 1985,p.3)

According to the project report this method proved highly successful in Black schools in Soweto in an evaluation made in November 1964. Elements of the phonics approach are still to be found in Black primary schools today.

The main criticism of this approach is the emphasis on letters which does not lead to understanding of the text, but to "barking at print" (Chall 1983). The spelling irregularities which occurred were also a common criticism (Pitt 1985).

3.2. Word Recognition Approach / Look and Say Method:

This approach is, ostensibly, concerned with meaning. The pupils are encouraged to build up a vocabulary of approximately a 100 or so words they can recognise on sight and the use of flash cards is common (Pitt 1985). This method started as a reaction to the phonics approach and became very popular in the 1960's. However, in actual practice, it differed little from the phonics approach as it concentrated on the recognition and pronunciation of words, often with the "sounding out" of letters to aid pronunciation. It appeared to be assumed that once the words had been identified, the meaning would become clear (Weaver 1980, Pitt 1985).

This approach is still commonly used in Black schools today with the words being written on the chalkboard and children repeating them after the teacher (Sithole 1990). Much emphasis is placed on repeating the words and recognising them in isolation and contextual meaning appears to be incidental to recognition of words.

3.3. Language Experience / Whole Sentence Approach:

This view looks at reading as an active process. For example, pupils are shown pictures and asked to comment on what is happening in the pictures. Sentences are then written on the chalkboard. Individual words, in context, are then isolated and taught and thus recognition of words follows rather than precedes meaning. The third stage is when readers are expected to recognise sentences and are encouraged to guess at the meanings of words (Pitt 1985, Morris 1963). Many theorists such as N. Chomsky (1965), J.H. Jagger (1929) and S.D. Krashen (1981, 1982) advocate the whole sentence approach to the teaching of reading.

This approach would appear to depend on the child's initial grasp of the language and the teacher's ability to adapt and be creative in the classroom. J.H. Pitt (1985) in the summary to his D.Phil. thesis has this to say about the reasons for the deficiencies in reading skills in second language learners:

- "1. The syllabus fails to direct teachers to well-defined skills and processes which have to be cultivated in beginning reading.
2. Teacher-training institutions lack directed reading instruction programmes, and in-service support for a developmental reading programme is non-existent.
3. Teachers are lacking in understanding the reading process, hence their restriction to teaching mechanical (word attack) skills in narrative texts.
4. The society fails to stimulate the reading habit in its children."

(Pitt 1985, p. 247)

3.4. Reading Stages:

A number of theories concerning the stages through which a child progresses as s/he learns to read have been posed, but the one which has been most influential in the planning of the research programme outlined in this dissertation has been that of Jeanne Chall (1983) since her theories seem to be addressing the particular needs of pupils in the current education system for the reasons outlined below.

Chall proposes a developmental theory of reading and discusses the various stages through which each person progresses. She states that

"when reading development is delayed by personal or environmental factors or both, the effects on the person, unless given special help, are too often disastrous, in spite of normal and even high general imaginative ability." (Chall 1983, p.3)

Chall bases her work on that of Jean Piaget's stages of cognitive development and states that all reading stages are a form of problem-solving for the individual. Each individual must make his/her own adaptation to the environment and the effectiveness of his/her transition from one stage to another is dependent upon external factors such as culture, opportunity, schooling and direct intervention by a significant caretaker be that a teacher, parent, peer or acquaintance. Each stage is characterised by certain skills and techniques and progress through the successive stages is dependent upon the acquisition and automatisisation of those skills. A reader may remain in a certain stage, for example

"If the accuracy, analysis, and synthesis of the decoding stage (stage 1) are not succeeded by reading practice that requires a faster pace and greater reliance on context (stage 2), the reader may hold on to the successes of the earlier stage. Similarly, if the reader is not challenged with new demands for accuracy in gaining new information (stage 3), he or she may persist longer in less accurate, more contextual reading (stage 2)." (Chall 1983, p.12)

3.5.Chall's Stages of Reading Development:

(Chall 1983, p.13-24)

3.5.1.Stage 0. Prereading : Birth to age 6.

From birth to the beginning of their school careers, children in a literate culture are exposed to books and other printed material. These children are read to and even "read" books themselves, by interpreting the pictures. Because of this exposure, the children gain insight into the world of words; they learn to control syntax and vocabulary, and recognise the word-patterns and rhythms of speech.

Chall quotes research which indicates that

"the various abilities, knowledge, and skills acquired during the Prereading Stage are substantially related to success with reading at Grade 1." (Chall 1983. p.14)

Chall is talking about white, middle-class, American children growing up in a western culture and going on

to face a western culture based education system. Obviously the problems of the average Black South African child who does not have this exposure to the printed word, whose prereading stage is one of an oral culture and not a printed one are exacerbated.

3.5.2. Stage 1. Initial Reading or Decoding Stage :
Grades 1-2. Ages 6-7.

In stage 1 the child learns to interpret the letters that make up the word and then to associate those letters as parts of spoken words - what is often termed as "barking at print". Chall shows that young children are actually engaged in a form of pseudo-reading; they

"supply their own words because they do not know enough about how to get the author's words from the printed page." (Chall 1983, p.18)

In order to progress they have to learn to understand what the author's words mean, to focus on the text itself much as mature readers will do.

"The essential aspect of Stage 1 is learning the arbitrary set of letters and associating these with the corresponding parts of spoken words. In this stage, children and adults interiorize cognitive knowledge about reading, such as what the letters are for, how to know that bun is not bug, and how to know when a mistake is made." (Chall 1983, p.17)

3.5.3.Stage 2. Confirmation. Fluency. Ungluing from Print: Grades 2-3; Ages 7-8.

Stage 2 does not involve the acquisition of new learning skills, but consolidates what was learned in stage 1. The child now reads for himself familiar stories and because the content is not new, s/he can concentrate on the words and spelling of the language. S/he is using decoding skills and acquiring speed and fluency in reading. The variety of books published for White children in this age group provides ample choice for practice. Publishers are not keen to publish books in the Black languages because of the limited market and thus most books published for Black children are translations from other cultures. The content is not familiar to the child; they are not the stories that these children have been told at home and this opens up a wide field of research which is needed in South Africa to ascertain the effect of this on the reading patterns of the average Black child.

Chall points out that in all attempts to improve adult literacy it has been found that mastery of stage 1 reading is relatively easy, but most literacy campaigns fail at stage 2 because of the lack of suitable reading material to improve fluency. She also points out that there is often not the incentive to continue reading.

This theory is supported by Reuven Feuerstein's findings among backward learners in Israel. He found that those students who had a rich tradition of reciting the Talmud and participating in religious ceremonies learned to read faster and had more incentive to carry on reading than the students who came from non-literate backgrounds (Feuerstein 1980).

If a child's parents are illiterate or cannot afford to buy books and magazines, the child will obviously not be able to take advantage of this extremely important practice time and will not be ready to move on to the next stage. There are very real attempts (in Black education) to form libraries in schools, but if there is no encouragement from the parents, the child is unlikely to form the reading habit and it will be reduced to a "school" activity and regarded as work.

3.5.4. Stage 3. Reading for Learning the New:

In stages 1 and 2 children relate print to speech, that is, they learn to read; in stage 3 they relate print to ideas - they read to learn. There are many ways of acquiring new information and at the beginning of stage 3 the child may well learn more from listening and watching than reading, but

"hypothetically, by the end of stage 3 the efficiency of reading may equal and begin to surpass that of the other means of gaining new information, particularly listening." (Chall 1983, p.21)

Essentially the material provided for reading in this stage should contain only one viewpoint. The reader at this stage needs to learn a process of how to find information : how to find a topic sentence in a paragraph, how to summarise the main idea of a chapter and where to find particular information in a book. having mastered the art of dealing with a single viewpoint, the reader is then ready to progress to the complexities of comparing points of view and different sources, that is, stage 4 reading.

3.5.5.Stage 4. Multiple Viewpoints : High School, Ages 14-18

It is significant that Chall does not point out a definite age group for stage 3 readers, but seems to infer that all children should be ready for stage 4 reading at the age of 14 - another area which could be explored in depth with regard to Black readers in this country.

Stage 4 reading is acquired through formal education and exposure to a multiplicity of viewpoints through more mature fiction, newspapers, magazines, textbooks and reference works - in other words libraries and their resources.

3.5.6.Stage 5. Construction and Reconstruction - A World View: College. Age 18 and above:

Stage 5 reading is that of the selection of what to read, in what depth it will be read and what not to read. The student at tertiary level must be able to skim, select, take notes, compare, analyse and then reconstruct knowledge for himself. Understanding and recognition of the various levels at which fiction is written are also implicit at this stage. The explosion of knowledge has been so vast in this century that no student can possibly expect to rote-learn and regurgitate in an examination or essay a certain number of facts nor, indeed, is it desirable to do so. Stage 5 reading skills are essential for knowledge to be internalised and reconstructed in a variety of situations.

3.6. Conclusion

Chall's theory of reading stage developmental levels and the reasons why children do not reach the higher levels of reading have been central to the formation of the ideas behind the intervention programme designed for this dissertation. In order for children to comprehend what they are reading they must progress beyond stage 1 reading - the level which is deliberately taught using methods such as phonics, look and say or sentence recognition. Stage 2 reading, that is, practice in concentrating on the text by means of familiar stories, is an essential part of developing reading skills to enable the child to move on to stage 3, that is, reading to learn.

If children are not exposed to stage 2 reading or are exposed to reading content which is unfamiliar, they run the risk of not acquiring the necessary skills in reading comprehension which should be developed through exposure to text. In order to rectify this the intervention programme attempted to allow the child to focus on the text for the selection of individual words (keywords) necessary for understanding meaning. The pupils were taken back to stage 1 and stage 2 reading levels deliberately and then taught through mediation on stage 3 reading passages, that is , passages containing a single viewpoint, how to acquire reading comprehension skills.

CHAPTER 4

4. RATIONALE:

The rationale behind the formulation of the mediation programme used in the intervention process described in this dissertation is derived from the works of Vygotsky (in Bruner 1985 and Cole 1985), Bandura's (1971, 1977) Social Learning Theory, Feuerstein (1979), Sternberg's (1985) Triarchic Theory of Intelligence and Borkowski's (1985) general model of intelligence. Many guidelines have also been taken from the work of Adams and Wallace (1987, 1988, 1991).

4.1. The Mediation of Learning Experiences

Vygotsky stresses the vital importance of cultural transmission and intentional mediation of a child's learning experience. In situations where these two processes are inadequate the child will not develop fully effective cognitive functions and thus will not be able to fulfil his/her potential (Adams & Wallace 1991). Children who have not been exposed to sufficient mediation of learning experiences can be helped to overcome this problem through a deliberately planned programme of intervention (Feuerstein 1979, 1980, Campione, Brown & Ferrara 1982, Brown and Ferrara 1985).

In Vygotsky's theory, the tutor or significant adult is seen as the facilitator of activities which allow the child gradually to gain mastery over each step of the learning experience which is seen by Vygotsky to occur within the context of social transaction. The tutor provides the "scaffolding" that enables the child to move to the next step in the learning process (Bruner 1985).

In the intervention programme, the researcher took the role of the tutor in that the programme was explained to the pupils and the initial learning experience was taught to them. As the pupils became more confident in what they were doing, the researcher allowed them to dictate the speed at which they learned and also to control what was learned. In other words, there were no rigidly planned lessons, but a flexible outline which allowed for individual expression, but still provided the "scaffolding" for all the pupils to gain mastery over the skills of selecting keywords and topic sentences.

4.2. Bandura's Social Learning Theory

The role of the teacher/tutor is also developed in Albert Bandura's Social Learning Theory (1971, 1977).

"Bandura assumes that learning involves a 3-way relationship between the environment, personal factors, and behaviour (which includes the learner's cognitive processes). The relationship between each of these 3 influences is bi-directional. For example, membership of differing social classes may activate differential social treatments, leading to varying influences upon self-concept which in turn influence perception of events and consequent actions.

Bandura refers to this as reciprocal determinism."

(Adams & Wallace 1991, p.11)

Social Learning Theory suggest three components of learning:

1. Modelled behaviours - these can be live, verbal, or symbolic, for example, parents, teachers, television, written instructions, films etc. The

characteristic of a model stimulus is that the learner can extract information without the need to act overtly.

2. Consequences of behaviour - these can be direct or indirect, but act as reinforcement agents. The consequences of behaviour could be direct punishment or positive reinforcement or, ideally, self-reinforcement which is directly controlled by the learner and the most powerful reinforcer of all.

3. Learners' cognitive processes - his/her ability to encode and store learning experiences, including attention, retention, motor production and motivational processes.

(Adams & Wallace 1991)

Bandura 1982 suggests that the acquisition of complex skills and abilities depends upon two additional components, that is, perceived self-efficacy and self-regulation. These two components are particularly important to the pupils since the style of learning inherent in the Black Education system in South Africa is not particularly conducive to the child's gaining a positive self-image or being allowed to develop the skills of self-direction in learning. This problem is referred to in detail in Chapter 2. As was apparent in the intervention programme, the children gained confidence in their own ability to tackle the task put before them and the enthusiasm with which they approached each lesson was remarked upon by the independent observer in the classroom. Self-motivated learning was a key issue in the intervention programme and the manner in which the pupils tackled the tasks set for them was indicative of a growth in this direction.

The researcher deliberately "modelled" the required behaviour for the children by constructing sentences on the chalkboard using keywords, but once the children had grasped the concept, the researcher/tutor's role was reduced to that of facilitator and the children worked at their own pace, together and in small groups within Vygotsky's paradigm of learning as a social experience.

4.3. Sternberg's Triarchic Theory of Intelligence and Borkowski's Model of Intelligence

Sternberg's (1985) Triarchic Theory of Intelligence was also influential in the formulation of this research programme. Sternberg explains intelligence in terms of the following three inter-related aspects:

- (i) the contextual sub-theory
- (ii) the experiential sub-theory
- (iii) the componential sub-theory

(i) The contextual sub-theory is where intelligence is considered to be a mental activity which comprises a purposeful adaptation to and selection and shaping of real world environments relevant to one's life. Sternberg emphasises that the learner should not only adapt but be confident enough to make selections from and to shape his/her environment. This implies flexibility in teaching and the empowerment of the learner. However, if the environment is debilitating the learner becomes submissive.

In the intervention programme the lessons were not rigidly planned and followed the direction indicated by the pupils' responses. For example, it was not anticipated that the pupils would tend to give very complex sentences when asked to form sentences using simple keywords such as CAT and DOG and CHASED. As the

pupils' needs were revealed, so they were addressed by the researcher and self-confidence was thus built up leading to the empowerment of the learner.

(ii) The experiential sub-theory proposes that performance on any task is an indication of intelligence only to the extent that it requires:

- (a) the ability to deal with novel tasks and/or
- (b) the ability to automatize the processing of information.

The implication of this sub-theory is that each pupil needs to be given a repertoire of thinking tools and processes necessary to deal with novel tasks and that this should be done through a deliberately designed programme of intervention, mediated by a capable tutor. This is a very different perception of the education process from that of the behaviourist paradigm of conditioned responses to set situations.

Through mediation the pupils were taught to identify keywords and topic sentences and were then required to use those skills to summarise a given passage of writing. The success of the intervention programme in giving the pupils the thinking skills necessary to deal with novel tasks can be seen in their responses to the summarisation exercise which was administered in the week following the post-test by the class teacher (see Addendum 3).

(iii) The mechanism of information processing is specified in the componential sub-theory, that is, the meta-components, performance components and knowledge acquisition components necessary for the solving of problems. These components are interactive and need to be trained simultaneously in any thinking skills programme.

Sternberg emphasises metacognition as does Borkowski (1985) who elaborates a general model of intelligence first proposed by Campione and Brown (1978). In the intervention programme the pupils reflected on the processes involved and the transfer of skills to other contexts was deliberately encouraged.

4.4. Remediation of Learning Experiences

Feuerstein (1979, 1980) working among the immigrants who flocked to Israel from a variety of nations has built upon Vygotsky's theory of deliberate mediation and planned intervention of learners' experiences. He emphasises that, provided there is no organic impairment, remediation of all learning experiences is possible. Campione, Brown and Ferrara (1982) also stress that remediation is possible and that underfunctioning results from insufficient remediation of learning experiences. The writer undertook a remediation programme whereby the pupils were given experiential learning in order to acquire the skills of selecting keywords and topic sentences.

4.5. The Thinking Actively in a Social Context (TASC) Project

A further influence upon the development of this research programme has been the work of Adams and Wallace (1987, 1988, 1991). The extended Thinking Actively in a Social Context (TASC) Project of Adams and Wallace (1991) states that the authors essential belief is:

"that the classroom teachers and the pupils themselves should play a major role in the development of any course purporting to meet their needs." (Adams & Wallace 1991, p.13)

In the execution of the research programme outlined in this dissertation, the researcher attempted to involve the teachers in the choice of selected reading passages and the pupils and staff in the implementation of the programme. The way in which the programme was developed was determined by the responses of the pupils at each intervention session.

The basic underlying principle of the TASC model includes the following concepts which are central to the formation of this research project.

1. Adopt a model of the problem-solving process and explicitly teach this.
2. Identify a set of specific skills and strategies and give training in these.
3. Give ample practice in both the skills and the strategies.
4. Give attention to the motivational aspects of problem-solving.
5. The progression of teaching is from modelling by teacher to guided activity by the learner, and eventually autonomous action by the learner.
6. The emphasis is upon cooperative learning in small groups.
7. The teachers should encourage pupils' self-monitoring and self-evaluation.

(Adams and Wallace 1991, p.14-17)

These theorists formed an eclectic base for the derivation of the intervention programme which is outlined in Chapter 6.

4.6. Conclusion

With the above principles in mind, the researcher attempted to design an intervention programme which would address an identified need in Black Education,

that is, the difficulties experienced by the pupils in comprehending English texts. The researcher filled the roles of mediator and model which were needed by the pupils to enable them to grasp the initial concepts and then, through group work and sufficient practice the pupils were encouraged to progress at their own pace and master the processes completely. The programme was designed to encourage autonomous learning and to be applicable in all subjects, although it was carried out in the English and Library periods. The transfer to other subject areas of the skills of selecting key words and finding topic sentences as a means of comprehending text and writing summaries was not addressed in this dissertation, although one post-test carried out after the research programme indicated both retention and transfer of the mediated skills to other reading contexts (see Addendum 3).

CHAPTER 5

5.READABILITY OF TEXTS AND READABILITY FORMULAE

5.1.Definitions:

The term "readable" is normally equated with understandable or comprehensible when it refers to text and such considerations as legibility and interest tend to come much later.

"The term readability is generally used to refer to the assessment of the difficulty that a reader of a certain level of skill may have in reading a piece of connected written discourse or text."

(Husen 1985, p.4203)

A readability formula is a predictive device that uses counts of sentence length, syllables, word lists and other variables in a piece of writing to provide a quantitative, objective index of style difficulty. The readability score obtained from the use of such a formula represents a prediction that readers with reading skills of a certain grade level will be able to comprehend the text.

5.2.Measuring Readability:

There are three major ways in which the readability of text can be measured:

1. Judgements of teachers and other experts in the field of writing.

"..one can get a relatively accurate picture of readability by noting the familiarity of the content words alone, that is, the nouns, verbs,

adjectives and adverbs. Of these, the nouns appear to be most critical." (Klare 1974-1975, p. 97)

It has been shown that one individual's opinion of the readability of a text for a particular age group is not usually reliable, but that a group of experienced educators who pool their findings on selected texts are usually reasonably accurate in their assessment of the readability of those texts (Harrison 1980, Klare 1982). However, Klare has also pointed out that the selection of suitable books for specific age groups is not dependent on the experience of the educators in the field of teaching reading. Their judgement, based on their years of experience in teaching a particular subject and on their knowledge of the pupils they teach, can also be relied upon. Thus suggesting that the suitability of a text for a certain standard at a school could be assessed by the teachers involved in the teaching of the subject and need not be carried out by outside agencies or by applying artificial means (Klare 1982).

2. Measures:

This refers to the performance of readers on comprehension tests which could be assessed by the use of multiple choice or short answers to questions set by the researcher. The problem with this type of measure is that no account is taken of the background of the reader or of how much of what is being tested lies in the skill of the researcher who composes the questions. Another problem of this type of assessment is that skilled readers can often answer a number of the questions without referring to the text at all as they can pick up sufficient clues from the questions themselves. Another measure that has achieved a certain amount

of credibility and usage is the "cloze procedure" where standard length blanks replace every "nth" (usually every 5th) word in a passage of writing and the reader has to guess the missing words from the context (Harrison 1980, Klare 1974-1975, 1982, Coleman 1975, Davison 1985). This procedure has the advantage of being an exact scoring method as the precise words must be given and only minor spelling errors are allowed. However, one of the problems with this method is that it does not test different types of comprehension skills and may depend upon the reader's knowledge of the language or his background knowledge, rather than the material read.

3. Readability formulae:

" A readability formula uses counts of language variables in a piece of writing in order to provide an index of probable difficulty for readers." (Klare 1974-1975, p.64)

There have been over 200 formulas published up to 1974 (Klare 1982). This type of assessment of the readability of text has proved so popular because they are relatively easy to use, efficient, provide convenient grade levels for comparison and because of their predictiveness. Typically they correlate in the .80s or low .90s with the comprehension criterion on which they are based, and often maintain this level in cross-validation. Discussions on readability formulae have also been included in many textbooks on reading and their usage forms part of many College reading courses (Klare 1982).

5.3.Procedures for Achieving Readability Formulae

Similar procedures have been followed to obtain all the readability formulae:

1. A sample group of passages is selected.
2. Comprehension tests are drawn up on the passages. These could be either multiple-choice type questions about some aspect that has been read or employ cloze procedures as have been outlined above. The comprehension tests which have been most widely used for deriving readability formulae are those of McCall and Crabbs (1925). This is a collection of over 300 graded passages which have been updated and added to over the years (Harrison 1980)
3. The passages are then tested on a single group of subjects and scored to determine their relative difficulty. Certain norms such as the number of correct answers given in the multiple-choice questions or the number of correct insertions in the cloze test are employed. The answers given by the subjects are marked as to whether the answers given in the multiple choice questions are correct or not and the words inserted in the cloze tests must be absolutely accurate with allowance only being given to minor errors in spelling.
4. Scaling procedures are then used to scale the passages as to the level of difficulty in terms of the average reading ability of students who score at the criterion level of performance on the test of that passage.
5. Various features of the language in each passage are counted, for example, syllables, word length, and sentence length.
6. Intercorrelations among the linguistic and difficulty variables are calculated using the statistical technique of regression analysis.

7. A multiple regression equation is calculated for estimating the scaled difficulty of a passage from the linguistic variables.

(Harrison 1980)

5.4. Validity of Using Readability Formulae:

In discussing the validity of the readability formulae, Schuyler(1982) says that readability formulae are constantly compared to each other, usually by means of linear regression analysis and very high correlations are obtained. These indicate that one formula is a reasonably reliable indicator of another which is not surprising when one considers that they are all measuring a similar body of data derived from the number or size of words and sentences. In other words they are self-correlating. However, the accuracy of assessing the exact Reading Grade Level scores continuously disagree and Schuyler gives an hypothetical example where the grade levels differ to the extent that on a single passage one readability programme claimed a level of difficulty in the primary grades and another readability programme indicated middle school range material. FOG INDEX scores are consistently high and the Automated Readability Index (ARI) and POWERS scores consistently low. This raises the question of the validity of the readability formulae, but most writers agree that readability formulae cannot be expected to give 100% accurate assessments, but should be used to indicate the general readability of text not exact grade levels. (Schuyler 1982, Flesch 1950, Harrison 1980, Coleman 1975, Klare 1974-1975, 1982)

5.5. Usage of Readability Formulae:

The original intended purpose of the readability formulae was to ensure that school materials were suitable for the age group intended as they gave

teachers a more objective assessment. If they are used to predict the suitability of text for a given grade level, there is no harm in their usage as long as prediction is all that is needed. (Klare 1974-1975, Harrison 1980)

"as long as predictions are all that is needed, the evidence that simple word and sentence counts can prove satisfactory predictions for most purposes is now quite conclusive" (Klare 1974-1975, p. 98)

It is only valid to use readability formulae on narrative or expository prose and on a piece of continuous text of preferably one hundred words or more.

Readability formulae provide convenient numbers for research purposes and lend objectivity to the process of evaluating writing. A. Davison (1985) writing in The International Encyclopedia of Education warns however that readability formulae should not be used

"..to the exclusion of judgements about other factors, such as the background and motivation of potential readers, and the organisation and coherence of the texts being measured." (Davison 1985, p. 4205)

These very important factors cannot be ignored when an attempt is made to assess the readability of text. Readability formulae do not take into account the background knowledge, experience of the reader or his motivation and interest in the text.

Another problem which arises is the fact that short sentences and simplified vocabulary do not necessarily in themselves make a text easier to read. Poor text organisation and the lack of suitable connectors

between sentences cannot be measured by a readability formula which relies for its effect on the counting of syllables and length of sentences. Experienced writers can manipulate text so that it will pass a readability formula test, but will fail to interest the reader or, even worse, will be incomprehensible to the reader.

"Readability is an attribute of texts;
comprehension is an attribute of readers."
(Harrison 1980, p.33)

Comprehension is a difficult term to define because it depends on many factors which go beyond merely decoding the text and the appreciation of word meanings. With support and motivation or either, a child can cope with a text of up to two years above his reading age. (Harrison 1980) Readability formulae are a useful tool in predicting the suitability of text for a specific grade level, but should be used with circumspection.

5.6.An Analysis of the Readability Formulae Used in the University of Natal Computer Programme

5.6.1.Dale Chall:(1948)

The Dale Chall formula is widely used in the testing of readability and is recommended for use in the literature on readability programmes:

"In readability research carried out for the Schools Council Effective Use of Reading project (Lunzer and Gardner 1979), a validation study suggested that of the eight formulae under consideration, that of Dale and Chall(1948) had the highest validity, in that its prediction had a correlation of 0.77 with the criterion of pooled teacher judgements." (Harrison 1980, p. 52)

For the purposes of this study the passages were matched using the Dale-Chall formula. The following table shows a summary of research data on nine readability measures and ratings of ease of application. The more "+"s the better is the programme rated.

	Validity	Age level accuracy (8-16 age range)	Ease of application
Flesch formula	++++	+++	++
Fry graph	++++	+++	+++
Powers-Sumner-Kearl	++++	+	+++
Mugford formula	++++	++++	++
FOG formula	+++	++	++++
SMOG formula	+++	++	+++++
Dale-Chall formula	+++++	++++	+
Spache formula	++++	++	++
FORCAST formula	++	++	++++

(Harrison 1980, p.61)

Not all of the programmes listed above were available to the researcher, but the table does indicate that the Dale-Chall formula is one that is rated very highly amongst readability programmes. The only drawback to the programme appears to be in its ease of use where it only scored one "+". This, however, refers to the ease of manual scoring of the formula which is a tedious process as each word must be checked against the list of 3000 most commonly recognised words. With the use of a computer this drawback falls away.

This programme uses a list of 3000 words which were best known to 80% of a sample of American 4th graders (8-year-olds) in conjunction with sentence length and other factors to assess the grade level of text. The Reading Grade Level (RGL) given by the programme covers two grades at a time and does not attempt to limit the level to an exact reading age in months. For example, if the programme gives a RGL of 5-6, it means that the reading level of the passage is suitable for children between 10 and 11 years of age. It might be useful at this point to include the corrected age levels scale found in Harrison (1980, p.75):

<i>Dale-Chall formula score levels</i>	<i>Corrected age</i>
4.9 and below	9 and below
5.0-5.9	10-11
6.0-6.9	12-13
7.0-7.9	14-15
8.0-8.9	16-17
9.0-9.9	College
10.0 and above	College graduate

The list was developed in the 1940's and is therefore a little outdated with words like 'schoolmaster' included and not words such as 'television', but it is still highly regarded by reading specialists both in South Africa and abroad (Harrison 1980, Klare 1974-1975, Blacquiere 1990). It is not possible to compute accurately RGL's less than 4th grade with the Dale-Chall formula, since the original list of words was based on the studies carried out on 4th graders and so any grade level less than 4th grade is

indicated as "4th or less" and no exact reading grade level is given. The original list of words has been updated, but the University of Natal's computer programme uses the old list and this is the only computer readability programme available at the University.

The Dale-Chall formula used the 1925 McCall-Crabbs Standard Test Lessons in Reading as a criterion. This is a collection of over 300 graded reading passages which have been used by researchers over the years as a yardstick of text difficulty (Harrison 1980, Klare 1974-1975, Davison 1985). Jeanne Chall called the McCall-Crabbs passages the best criteria yet devised for readability work (Harrison 1980).

"Because the passages are carefully graded in order of difficulty, a researcher can consider the linguistic factors associated with a text's difficulty and combine them into a formula. The statistical technique of regression analysis is used to find the arithmetic equation which best expresses the relationship between linguistic variables, such as word frequency and sentence length, and the actual passage difficulty, as determined from its placement in the McCall-Crabbs tests. Because they contain so many passages, these tests give a range of difficulty which allows for a more reliable analysis of linguistic factors than would otherwise be the case."

(Harrison 1980,p.39)

Actual formula:

$$\text{RGL} = .1579 (\text{B4/W } 100) + .0496 (\text{W/S}) + 3.6365$$

The variables:

B4 = Words not on the Dale List of 3000 (unfamiliar)

W = Words in the passage

S = Sentences in the passage.

(Schuyler 1982, p. 564)

This formula is difficult to count manually as each word in the passage must be compared with the Dale List, but can be done efficiently and quickly by computer.

Even though it may be considered that the Dale-Chall programme for assessing the readability of text is outdated, the researcher looked carefully at the other programmes available on the computer programme for assessing readability available at the Language and Reading Centre, University of Natal, Pietermaritzburg and decided in the light of what has been outlined above to use this formula to match the passages chosen as carefully as possible. Words, which in the opinion of the researcher in collaboration with Mr Arie Blacquièrè, the Director of the Language and Reading Centre, that would have been familiar to a South African child and which were not included in the Dale-Chall list of 3000 words were excluded from the count of unfamiliar words. In this way the researcher attempted to make the programme more suitable for use in a South African context.

Other reading formulae examined because they formed a part of the University of Natal's computer programme for assessing the readability of text but not considered of primary importance for the purposes of this particular dissertation are as follows:

5.6.2 Automatic Readability Index (Devereaux)(1961)

ARI or Automated Readability Index was developed in 1961 by Edgar Smith specifically for its ease of automation, that is, it is easily scored by computers. However, it consistently grades passages lower than the other formulae.

"ARI typically gives grade levels of 5 and 6 while other formulas range from 12 to 14."

(Schuyler 1982, p. 568)

Actual formula:

$$\text{RGL} = 1.56 \text{ word length} + .19 \text{ sentence length} - 6.49$$

The variables:

word length in characters

sentence length in words.

(Schuyler 1982, p.568)

5.6.3.Flesch Reading Ease (1948):

This reading formula was first published in 1943 by Rudolf Flesch. His primary interest lay in the area of adult reading matter in terms of reading ease and human interest and he produced a formula for both. Both formulas are based on the McCall-Crabbs Standard Test Lessons in Reading (1925).

The formulae:

$$\text{R.E. (Reading Ease)} = 206.835 - .846 \text{ wl} - 1.015 \text{ sl}$$

$$\text{H.I. (Human Interest)} = 3.635 \text{ pw} + .314 \text{ ps}$$

The variables:

wl = number of syllables per 100 words.

sl = average number of words per sentence.
 pw = number of personal words per 100 words.
 ps = number of personal sentences per 100 sentences.
 (Klare 1974-1975, p. 69)

The formula used in this programme gives an indication of reading ease and uses data from the Dale List of 3000 words. The first score reflected in the print-out is an index score which is then translated to the grade score by the computer programme.

Pattern of readability scores:

Readability Score	Description of Style	Syllables per 100 words	"Definite Words" per 100 words
0 to 30	Very difficult	192	5
30 to 50	Difficult	167	14
50 to 60	Fairly difficult	155	22
60 to 70	Standard	147	29
70 to 80	Fairly easy	139	36
80 to 90	Easy	131	43
90 to 100	Very easy	123	50

(Flesch 1950, p.388)

Similar to the Dale-Chall formula, the Flesch Reading Ease formula will not give a readability assessment for passages that are easier than the American grade 4 level as the criteria on which it is based is calculated at grade 4 and above. It will also not specify the exact reading age in months as do some of

the other formulas.

The Reading Ease Formula

" became one of the most widely used in the history of readability measurement."

(Klare 1974-1975, p.69)

5.6.4.Fog Index (1952):

This formula was developed by Robert Gunning in 1952. Gunning noticed that the vocabulary variable of percentage of polysyllabic words (3 or more syllables) was quicker to count than the total number of syllables in a passage. This variable correlated highly with other vocabulary variables and he therefore used it to assess readability. However, this variable does not discriminate very effectively between relatively simple passages of prose, since the percentage of polysyllabic words per 100 words will be uniformly low. (Harrison 1980)

The formula has been used extensively largely because of the ease of manual application, but tends to give high scores (Schuyler 1982,Harrison 1980). It is not unusual to obtain RGL's of 17 or 18 for material graded at high school level. It is often viewed as a simplification of Flesch's Reading Ease Formula (Klare 1974-1975, Harrison 1980, Schuyler 1982)

The formula:

$$RGL = .4 (T/W 100 + W/S)$$

The variables:

T = Three-syllable words

W = Words

S = Sentences.

(Schuyler 1982, p. 565)

5.6.5. Powers (1958):

This is a re-calculation of the original Flesch formula. It gives a score in grade levels rather than an index, but tends to grade much lower than the other formulas especially in the higher grade ranges (Klare 1974-1975 , Harrison 1980).

5.6.6. Holmquist (1968):

Holmquist recalculated the Dale-Chall formula and added 102 words known to 80% of 4th graders, including words in Science. His major concern was whether changes in the vocabulary and reading abilities of pupils might not have lowered the validity of the Dale-Chall formula. However for this programme the formula reflects the original list, but uses a re-calculation of the Dale-Chall formula. It is specific about grade levels up to two decimal places (Klare 1974-1975, Schuyler 1982).

The formula:

$$RGL = (W/S) .0512 + .1142 B4 + 3.442$$

The variables:

B4 = Words not on the Dale List of 3000 (unfamiliar).

W = Words in the passage.

S = Sentences in the passage.

(Schuyler 1982, p. 565)

5.6.7.Flesch-Kincaid (1975):

Kincaid and others modified the original Flesch formula in 1975 for use with navy enlisted personnel undergoing technical training. It has become a Military Standard for deciding whether technical manuals from suppliers meet their readability requirements. The Flesch-Kincaid formula computes the grade level directly rather than through a reading ease score. It will calculate grade levels lower than 4th grade.

The formula:

$$\text{RGL} = .39 (W/S) + 11.8 (Sy/W) - 15.59$$

The variables:

S = Sentences

W = Words

Sy = Syllables

(Schuyler 1982, p. 567)

One of the disadvantages of using this programme is clearly stated in the following quotation:

"...the temptation to relate grade numbers to indices of difficulty in a linear fashion can lead to ludicrous outputs from analyses of highly difficult passages. The military scale for the Flesch-Kincaid readability programme, in an extreme case, characterised a passage from the California probate code as requiring 122 years of schooling for comprehension!"

(Klare 1982, p. 1525)

5.7.General Comments

1. Each passage had to be at least 300 words in length for significance.
2. Most of the readability formulae attempt to measure words and the length of sentences not punctuation.
3. Proper nouns were not counted as difficult words and were excluded from the count.
4. The University programme uses the nine different formulae already discussed to compute readability. As has been mentioned earlier, not all the formulae are appropriate to all grade levels although a score is given for each.
5. Having a variety of formulae available allows for comparison and thus the print-outs of each passage are included as addenda. Addendum 1 presents a sample of the passages themselves and the list of words which the computer programme defined as being difficult according to the Dale Chall list of the most commonly recognised words.
6. At the time that this research was conducted, due to circumstances beyond the control of the researcher, namely the damage to the computer programme, it was ascertained that the FRY graphs could not be included in the computations and a discussion of the FRY readability formula has thus been omitted from the discussion of the readability formulae.
7. As has already been pointed out, some of the formulae have better reputations than others and the limitations of each formula have to be considered before a selection is made of which to use.

5.8.Conclusion:

No readability programme is infallible nor comprehensive in its diagnostic indications and as long as the researcher uses them with knowledge of the

limitations and an awareness of exactly what the programme is indicating, they can give an indication of the suitability of the text for the intended user.

In the light of what has been discussed above, it was decided to match the selected passages using the Dale-Chall formula for assessing the grade level of the intended texts in as far as the level of word usage and sentence length was concerned. The researcher was fully aware that the Dale-Chall formula cannot assess the suitability of the passages chosen as far as the interest level of the pupils is concerned. In this respect the researcher, in conjunction with three experienced Std 6 teachers at Sukuma, selected the passages from Childcraft (1989), an American publication which is used internationally and is especially marketed for younger readers. The language level of Childcraft is controlled and no similar suitable publication has been published in South Africa to date. As far as was possible the passages chosen did not relate directly to any particular school subject and so it was considered to be unlikely that any child would have prior knowledge of the content of the passages which could have affected the outcome of the research programme.

CHAPTER 6

6. RESEARCH DESIGN

6.1. Choice of Experimental and Control Group.

6.1.1. Introduction.

Standard 6 classes were chosen since this is an area of major concern for all secondary teachers of English language in Black education. In many cases Std 6 is the first time the pupils are taught all subjects through the medium of English, even though English as a medium of instruction is supposed to come into effect in Standard 3.

6.1.2. Criteria for Matching Groups

The following criteria were taken into account in the matching of the two groups:

a. Ability to cope with English Language

Two Standard 6 classes at Sukuma Comprehensive Secondary School in Imbali, Pietermaritzburg were chosen as the experimental and control groups. For the first three months of the year all the standard six classes were mixed ability classes but early in March 1990 the Scholastic Aptitude Test Battery (SATB) for pupils in Standards 4 and 5 Zulu produced by the Institute for Psychological and Edumetric Research under the auspices of the Human Sciences Research Council (HSRC) was administered to the children by the school's guidance teacher. The tests for English and Mathematics were selected as the means of organising the children into ability groups.

Consequently, in March 1990 the pupils were placed

in graded classes and it was decided by the staff members concerned that the most suitable classes in which to conduct the research programme would be the two top classes, 6A and 6B. The raw scores obtained by the pupils in the SATB Tests are indicated in Appendix 1 and Appendix 2. The average score obtained by 6A in the SATB English test was 21,9 and the average score obtained by 6B was 19,3, indicating that both classes achieved reasonably well in the test.

b. Sex grouping

6A was made up of 35 girls; one of whom was absent for the entire project.

6B was made up of 32 girls and 3 boys (all of whom were repeating the standard)

c. Ages of pupils

The average age of the pupils in 6A was 13 years 3 months and in 6B was 13 years 9 months as of July 1990. The actual ages of the pupils ranged from 12-16 years in both groups. (see Appendix 1 and 2).

d. Home background of the pupils

According to the school records the pupils came from both urban and rural backgrounds.

6.1.3. Conclusion

Acting on the above information, it was decided to match the entire 6A class with the 6B class since there was little overall difference between the two classes with regard to SATB scores, sex, age and home background. Even though 6A was supposedly the "better" group, it was decided to use them as the experimental group and 6B as the control group.

6.2. Questionnaire

6.2.1. Introduction:

Pupils at Sukuma Comprehensive School come from diverse backgrounds ranging from those who come from rural communities to pupils who have grown up in an urban context. As diverse as is their home background, so is their exposure to text in the home and in the primary schools they have attended. A factor such as the amount of reading done by the pupils in their homes and in their spare time could well have influenced the result of the research programme to be attempted and so it was felt that an attempt should be made to assess the reading background of the pupils concerned, and to match the general reading background of the experimental and control groups as closely as possible within the limitations of the questionnaire itself.

6.2.2. Design:

A questionnaire based on the one used in the M Ed. thesis of D.F. de Kock (1961), using ideas derived from Schauffer (1964) and Bell (1985) was drawn up. This questionnaire (see APPENDIX 3) was piloted and then modified following an analysis of the results (see APPENDIX 4). Further detail of the questionnaire is given below.

6.2.3. Purpose:

a. To ascertain that the reading background of the pupils in the experimental group was not too diverse as to affect the outcome of the programme.

- b.To ascertain that the reading background of the pupils in the control group was comparable to the experimental group.
- c.To attempt to eliminate some of the variables pertaining to the general exposure to reading which might have affected the way in which the pupils approached the intervention programme. For example, a pupil who indicated an aversion to reading might not be amenable to participating in the programme at all and another who was an extremely avid reader might have skewed the mean and rendered the results of the programme invalid.
- d.To provide a background for each child which might be used to explain individual differences in scores.

6.2.4.Administration of Questionnaire:

a)Pilot questionnaire:

This was administered to a Std.6 mixed ability class at Sukuma Comprehensive School on 30 October 1989 during a normal class period. The class consisted of 35 female pupils between 12 and 16 years of age.

b)Research questionnaire:

The revised questionnaire was administered to two streamed Std.6 classes at Sukuma Comprehensive School on 10 August 1990 during normal class periods. The questionnaires were administered in consecutive periods. Both classes contained 35 pupils. The experimental group, 6A, contained only female pupils and 6B, the control group, had 32 females and 3 male pupils between 12 and 16 years of age.

6.2.5. Conditions of Administration:

- a. It was explained to the pupils that their anonymity would be preserved and that the personal details required at the beginning of the questionnaire were for the purpose of matching groups as closely as possible and that their names and responses would not be revealed to anyone other than the researcher.
- b. A Zulu-speaking translator was present to answer any questions in the pupils' home language for both sets of questionnaires.
- c. All instructions were given in English.
- d. The pupils were taken through the questionnaire item by item and time was allowed for each pupil to complete the response before proceeding to the following item.
- e. Examples of the types of material referred to in item 12 of the pilot and item 9 of the final questionnaire were provided, for example, a photo story and a comic book.

6.2.6. Selection of Questions:

a. General:

In order to ascertain the pupil's reading background, it was necessary to attempt to establish the extent to which books were available in the home, the number of books that a child reads in a normal month, what sort of material was normally read, where the pupil obtained the material that s/he read, and what the attitude to reading was. An overall picture of the pupil's attitude to reading and to the written text was considered to be a vital factor in the planning of the research programme as a pupil who showed a dislike of reading would be unlikely to enter into an intervention programme

based on the written word with much enthusiasm. In choosing the questions for the questionnaire the researcher was aware that the pupils might well give the answers they thought would please the researcher. With this in mind questions were devised by which cross-checks could be made on pupils' responses. A similar survey had been conducted by De Kock (1961) and this was utilised to form the basis of the pilot questionnaire. However, De Kock's survey was carried out with first language speakers and the questionnaire had to be modified for use with second language speakers.

The discussion which follows includes the reasons for the inclusion of the items and the way in which modifications were effected following the pilot study. Refer APPENDIX 1 and APPENDIX 2 for the full questionnaire.

b. Discussion of questions :

i. Questions 1-6

- "1. Name in full :.....
- 2. Home Address :.....
- 3. Date of Birth :.....
- 4. Sex :.....
- 5. School :.....
- 6. Standard :....."

" These are all standard information questions which are designed to allow the pupil to relax and answer questions with which s/he is familiar. The information thus obtained was referred to when the results of the intervention programme were analysed and an individual result needed explanation. These questions did not cause any problems in the pilot

study and thus remained unchanged in the final questionnaire.

ii. Question 7: Pilot study:

"7.Occupation of Parent(s): Father : : : : :
Mother : : : : :
Guardian : : : : :"

This question asked for the occupations of Father, Mother and Guardian of the pupil and caused a lot of confusion as pupils were unable to say what their parents did for a living unless they came from homes where the parents were professional people. The Zulu translator was kept very busy answering questions and a list of common occupations had to be written on the chalkboard to assist the pupils in describing their parents' occupations. After discussions with the teachers at the school it was decided to leave this question out of the final questionnaire as the information was obtainable from the school records if it was found to be necessary.

iii. Question 8: Pilot study:

"8. Number of brothers and sisters:.....

The pupils were asked how many brothers and sisters they had. This again proved to be a difficult question for the pupils to answer and it can only be surmised that this was due to the extended family system from which a lot of the pupils come. As there was no real necessity for the inclusion of this question for the immediate purpose of this dissertation, it was omitted from the final questionnaire.

iv. Question 9: Pilot study:

"9. When you are not at school, who looks after you? ..."

The purpose in asking the pupils who looked after them when they were not at school was to establish whether they in fact had access during the holidays to the books, if any, that were available in the home. Again this question posed difficulties to the pupils who had to ask many questions in Zulu as to what was required. Their answers revealed incomplete understanding of the question and it was decided that the question should be omitted from the final questionnaire. The fact that there were indeed books in the home was no guarantee that the pupils would read them or that they were suitable reading material for their age group.

All the other questions were retained from the pilot questionnaire with modifications which will be indicated in the discussion that follows. The numbering on the final questionnaire had to be changed, thus the number in brackets reflects the numbering on the final questionnaire and the first number given refers to the pilot study

v. Question 10(7):

"10. Underline the word/words which best describe how you feel about reading a book:

Very keen, keen, enjoy reading sometimes,
seldom read, hate reading, no time to read.

changed to:

7. Underline the word/words which best describe how you feel about reading a book:

Love reading, enjoy reading sometimes, don't often read, hate reading, no time to read".

The pupils' attitude to reading was considered to be a vital factor in the choosing of the experimental and control groups as a negative approach to reading could have adversely influenced the outcome. In the pilot questionnaire 6 options were given for the pupil to choose between to describe his/her attitude to reading. It was found that the pupils had difficulty in understanding the words "keen" and "seldom" and that the differentiation between "very keen" and "keen" was too fine. The wording of the final questionnaire was thus modified to bring the wording used to within the grasp of the pupils chosen for the research and the first two options were consolidated to form one option : "love reading".

vi. Question 11(8):

"11. Approximately how many books do you have in your home? Underline the figure which is closest in your estimation.

No books, 20 books, 50 books, 100 books, 200 books, more than 200 books."

The object of this question was to establish approximately how many books the pupil had access to in the home to give the researcher an idea as to the amount of exposure to text the pupil had had. The pupils had no difficulty in answering this question in the pilot study and the question was

thus retained without alteration.

vii. Question 12(9):

"12.Fill in next to each of the items mentioned below whether you read them regularly, sometimes, seldom or never:

Newspapers	.....
Magazines	.....
Comics	.....
Photo Stories	.....
Plays	.....
Poetry	.....
Short stories/novels	.....
Non-fiction"

The researcher wished to establish through this question the type of material the pupils were reading as this might have influenced the confidence with which they approached the passages that had been chosen for the intervention programme. The pupils had difficulty with the word "seldom" and it was decided to omit this choice from the final questionnaire as there was very little difference between the options "sometimes" and "seldom".

viii. Question 13(10):

"13.How much time do you spend a week reading other books apart from your school books?

.....
changed to:

10. Underline the closest amount of time you spend a week reading anything other than your school books:

no time, less than 30 minutes, 30 minutes, 1 hour, 2 hours, more than 2 hours."

This question (in the pilot study) asked the pupils to indicate how much time they spent in a week reading and was open-ended. It was designed to be a means of cross-checking the response to question 10(7). In the pilot study extreme responses were recorded of 2 days, 5 days and 7 days showing a total lack of understanding of the question. However, 30 out of 35 responses ranged between 0 minutes and 3 hours and so it was decided to modify the question in the final questionnaire to give specific times ranging from "no time" to "more than 2 hours" and ask the pupils to underline the closest amount of time that they spent reading in a week.

ix. Question 14(11):

"14. How many books (apart from School Setworks) have you read in the last month?

.....

changed to:

11. Ring the number of books (not including your school setworks) that you have read in the last month:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, more than 10."

In the pilot study this was an open-ended question that required the pupil to record the total number of books s/he had read in the past month. The purpose of this question was to get an indication of the speed at which a child read and to again provide a cross-check for question 10(7). Answers were received of "more than 80" and "many" with 29 out of 35 responses ranging from 0 to 10. It was decided to limit the number of responses to a range of 1 to "more than 10" in the final questionnaire to provide a more easily scored response for both pupils and researcher.

x. Question 15(12):

"15. Place a tick opposite the source/sources from which you obtained any material you have read in the past month:

School library	.....
Public library	.....
Books in the home	.....
From friends	.....
From magazines	.....
The newspaper	.....
A teacher	.....
Have not read anything yet"

This question was designed to provide a cross-check for a number of other responses and to indicate where the pupils were obtaining the material that they were reading. This question was retained in the final questionnaire with only a slight modification to the wording as it was found in the pilot study that all the pupils ticked that teachers had supplied them with books. On investigation it was established that the children

regarded the librarian as a normal teacher and that this was why they had ticked this category. The librarian was therefore specifically excluded from the option in the final questionnaire by modifying the item as follows:

A teacher (not the librarian)

xi. Question 16(13):

"16. Tick which language you would prefer to read in. (You may tick more than one if you like to read in more than one language.):

English	.....
Afrikaans	.....
Zulu	.....
Any other African language"

The researcher wished to establish that all the pupils did indeed read in the English language from choice as the intervention programme was designed around English passages although it could be adapted to any language, and so this question was included in the pilot study and retained unchanged in the final questionnaire.

6.2.7. Questionnaire Results

Q7

	love read.	enjoy read sometimes	don't often read	hate read.	no time
6A	20	15	0	0	0
6B	14	20	0	0	1

Q8

	no books	20 books	50 books	100 books	200 books	200+
6A	2	14	11	4	0	4
6B	3	15	10	5	1	1

Q9

		every day	sometimes	never
Newspapers	6A	1	34	0
	6B	4	27	4
Magazine	6A	8	27	0
	6B	5	29	1
Comics	6A	6	18	11
	6B	8	22	5
Photo stories	6A	7	28	0
	6B	5	18	12
Plays	6A	8	20	7
	6B	2	16	17
Poetry	6A	3	26	6
	6B	4	22	9
Short stories/ novels	6A	16	18	1
	6B	8	26	1
Non-fiction	6A	4	22	9
	6B	1	13	21

Q10

	no time	less than 30 mins.	30 mins.	1 hour	2 hours	2 hours+
6A	0	0	7	9	4	15
6B	1	1	7	13	9	4

Q11

	0	1	2	3	4	5	6	7	8	9	10	10+
6A	0	1	3	5	5	6	5	2	2	0	3	3
6B	3	4	7	6	9	2	0	2	0	0	0	2

Q12

	6A	6B
School library	35	32
Public library	15	5
Books in the home	33	30
From friends	33	27
From magazines	32	26
The newspaper	27	25
A teacher (not the librarian)	11	29
Have not read anything yet	1	2

Q13

	6A	6B
English	35	35
Afrikaans	6	2
Zulu	32	31
Any other African language	21	8

6.2.8. Discussion of the Findings of the Questionnaire

1. Question 7 showed that within the two groups chosen for this project there were no apparent significant differences in attitude to reading with only one pupil responding that s/he had no time to read and no-one expressing a dislike of reading.
2. Question 8 revealed that the majority of the pupils in both groups came from homes where there were between 20 and 50 books in the home. A total of 5 pupils reported that there were no books in the home or that there were more than 100 books. The researcher was fully aware that the pupils might not have wished to reveal that there were no books in the home, but the range of answers indicated that it could reasonably be assumed that the exposure to books in the home was comparable for both groups.
3. Question 9 revealed some interesting information about the type of reading matter chosen by the pupils with the only possible advantage of 6A over the reading habits of 6B being suggested by the overall response that 16 pupils in 6A reported that they read short stories/novels every day as compared to 8 responses from 6B. However, no indication was allowed for in the questionnaire as to the kinds of short stories/novels that had actually been read. The patterns revealed in this survey deserve closer attention than they were given in this study and could be an area for further research. The object of this question was to indicate the general reading patterns of the two groups and to ascertain whether they were basically similar.

4. Question 10 showed that 6A spent significantly more time than 6B on reading, but a question that must be raised is that African culture has a different perspective of time (Hawes 1979, Salia-Bao 1987) and doubts were already expressed in the pilot study about the validity of this question. In the pilot study when the pupils were asked to respond to the question of how much time they spent on reading, extreme responses of 2 days, 5 days and 7 days were given. It was decided, however, that the answers to this question would not affect the matching of the two groups significantly, but notice would be taken of individual responses should a pupil's score on the pre-test reveal that s/he was a practised and skilled reader.

5. Question 11 showed an apparently even spread of the numbers of books read throughout both groups.

6. Question 12 showed again a very similar pattern between the two groups with two aspects worthy of comment:

a. More pupils in 6A used the Public library than 6B and this phenomenon requires further research which lies beyond the intention of this dissertation.

b. Twenty-nine pupils in 6B still reported that they had received books from a teacher other than the librarian and eleven in 6A. Further questions would need to be asked of the staff to confirm this, but again this was considered unnecessary as it did not affect the matching of the two groups.

The overall indication was that the pupils in 6A and 6B seem to be receiving material to read from various sources and that there are no significant

differences between the groups.

7. Question 13 indicated very strongly that all the pupils read in the English language from choice, since the response was 100% in both groups. It also raised an interesting point in that pupils seem to be very reluctant to read in the Afrikaans language and this would seem to be worthy of further investigation.

6.2.9. Conclusion.

The questionnaire achieved its main objective in that it provided information about the general reading background of the pupils in the two groups under consideration and showed that the reading patterns, access to books and familiarity with text was apparently the same for both groups. It also provided the means of referral to individuals if an explanation of extreme results in the study needed to be examined with regard to the possible influence that the pupil's reading background might have had on his/her results.

6.3. Pre-test

6.3.1. Introduction

The passage chosen for the pre-test was There is Hope (see Appendix 5 (a)). This passage was subjected to the University of Natal's computer programme for assessing readability of text and the list of words not included on the Dale-Chall list of 3000 words familiar to 80% of America's 4th grade pupils (8 year olds) was extracted and examined for their relevance to South African conditions (see Appendix 5(b)). No words were excluded from the readability count of this passage as it was agreed between Mr Blacquiere and the writer that all the words would indeed be unfamiliar to South African pupils. The computer print-out of the readability scores of the passage are included as Appendix 5(c).

On the Dale-Chall Readability Test the passage was assessed as being on a 5-6 level, that is, suitable for American children 10 to 11 years of age. This was considered to be a suitable level for Black second language pupils in the school chosen for the research.

6.3.2. Administration of Test.

The test was administered on 16 August 1990, during a normal school period of 1/2 hour duration. Thirty-five pupils were present in the experimental group 6A, and 35 pupils in 6B, the control group. The test was administered in consecutive periods for both classes and the pupils were not given any warning beforehand.

The researcher was introduced to the class and the purpose of the test was explained as follows:

- i. The researcher told the pupils that a piece of research was to be conducted using two Std 6 classes at the school. The use of an experimental and control group was explained to the pupils.
- ii. The concept of a pre- and post-test was fully explained and the confidentiality of the results was stressed.
- iii. The expected duration of the research programme was outlined to both groups.
- iv. The cooperation of the pupils was asked for.

The class teacher was present at all times. The passages were then handed out to the children and the researcher read the passage aloud to the pupils. The following instructions were then written onto the chalkboard:

1. Underline any words that you think are important.
2. Write out the important (main) sentences of the passage on a separate sheet of paper.

A sheet of paper was handed to each child and they were then given 20 minutes to complete the exercise.

6.3.3. Conditions Under Which Test Was Administered.

Photographs were being taken for the school magazine on the day of the test and the pupils were very excited. There was also a lot of movement along the corridors and the pupils were easily distracted. This was more noticeable in the experimental group than the control group who seemed to approach the test with a more serious attitude than the experimental group. Comments by the teachers suggested that since the streaming of the classes the experimental group, 6A, had tended to become rather complacent and perhaps over-confident and they were not at all surprised that the pupils' attitude to the pre-test was one of

over-confidence and a casual approach.

6.3.4. Scoring of the Test.

In order to make the scoring of the test as objective as possible, the researcher discussed the method of scoring with other teachers. It must be borne in mind, however, that the objective of the programme was to get the children to focus on the text, not merely to pick out key words. Appendix 5(d) indicates the method of scoring. Each word correctly underlined was allocated one mark and each topic sentence was also allocated one mark. For ease of comparison the marks were brought to a percentage.

6.3.5. Results

For a discussion of the results see Chapter 7.

6.3.6. Conclusion

The need for a mediated programme of intervention in the selection of key words and topic sentences was clearly indicated by the pupils' response to the pre-test. The results revealed that the pupils had a very poor grasp of the notion of a keyword and very little understanding of topic sentences.

6.4. Intervention Programme.

6.4.1. Introduction.

The object of the programme was to motivate the children to focus on the text closely and, in order to

encourage them to do this, the concept of picking out key words and topic sentences was introduced as an aid to understanding of the actual text. The concept of keywords was open to individual interpretation and the children were told throughout the programme that there were no absolutely right and wrong answers and that the number of keywords in a sentence depended upon the number of words that each individual required to be able to reproduce the meaning that the author was apparently trying to convey. Thus the approach in teaching this concept was one of mediation of understanding of the concept and building the child's self-confidence in his/her own ability to interpret text. The exact procedure is outlined below.

The researcher's role in the programme was that of mediator and role model and not of the traditional teacher. Apart from the initial introduction of the concepts, the researcher consciously withdrew from a position of authority to allow the children to work in groups, discuss the passages together and work with the programme in a relaxed (and often very noisy) atmosphere.

6.4.2. Time Scale.

The programme consisted of a total of 3 hours intervention in the experimental group 6A, stretching over one week. Two lessons were of 1 hour duration and two lessons were 1/2 hour lessons.

6.4.3. Method Used.

With the pupils' permission every lesson was recorded for future reference. The class teacher acted as observer throughout the programme and offered written and verbal comment on each lesson.

6.4.3.1. Lesson 1 (1 hour)Step 1

a. The pupils were asked to make sentences with the following word :

CRASHED

One sentence was chosen and written on the chalkboard.

To the word CRASHED, the pupils were asked to add the word CAR and to construct a sentence in the light of this addition. The word MAN was then also added in the same manner. In this way the researcher modelled the procedure for building sentences from keywords.

b. A second practice sentence was constructed by the children using the words CHILDREN, CRIED and MOTHER.

c. The concept of keywords and the use of nouns and verbs as keywords was introduced to the pupils.

Step 2

a. The pupils were then asked to try and guess what sentence the researcher had in mind using the following keywords:

DOG, CAT, CHASED, TREE, GARDEN

which were given one at a time to build the following sentence:

The dog chased the cat up a tree in the garden.

b. Practice was given in making up sentences using a series of keywords until the majority of the pupils were constructing sentences with ease and efficiency.

Step 3

The classroom was now arranged so that the children could work in groups of 4 and in pairs were asked to make up a sentence, isolate the keywords necessary to the meaning of that sentence and give the keywords to their opposite partners to guess the sentence they had constructed. This activity was first modelled by the researcher and the pupils then proceeded to "play" the game while the researcher gave assistance where necessary.

Observations.

1. All pupils gained confidence in the manipulation of words and in sentence formation and the degree of self-confidence was quite marked. This was noted by the class teacher who acted as observer throughout the programme, and by the researcher.
2. Only one group did not appear to have grasped what was required of them in the group work stage and did not enter into the spirit of enjoyment that prevailed. The class teacher remarked that they did not function well as a group normally and that the degree of participation was actually an improvement over their usual reaction.
3. Pupils tended to want to build very complex sentences and had to be encouraged to simplify their initial approach.

6.4.3.2. Lesson 2. (1/2 hour)

- a. As an introduction to the lesson the pupils were asked what a keyword was and what part of speech is most commonly used as a keyword. Every pupil could answer these questions correctly.
- b) Pupils were then asked to underline the keywords in sentences which were written on the chalkboard. For example: The boy feared the dark because he had been locked in a cupboard.
- c. Pupils were asked to make up sentences using keywords.
- e.g. PEOPLE USED ANIMALS PLANTS GIVE EVERYTHING NEED. (People have used animals and plants to give them everything they need)
- d. The passage Stalactites and Stalagmites (see Addenda for original passage) was read through with the children and they were asked to underline the keywords.

Observations

Pupils approached the lesson confidently and were well able to handle the work given to them. No pupil had difficulty with the passage and the level of concentration in tackling the passage was marked. Pupils were allowed to confer, work in groups or ask questions, but each one chose to work individually and in silence.

6.4.3.3. Lesson 3. (1/2 hour)

- a. Practice using different passages continued.
- b. The concept of a main (topic) sentence in each paragraph was introduced using the passage Bridges in the Sky (see Addenda)

6.4.3.4. Lesson 4 (1 hour)

The concept of topic sentences was enlarged upon and practice in the isolation of keywords and topic sentences was given using the following passages:

Acid Rain, Feelings and Plotting the Weather
(see Addenda)

Observations

The pupils had no difficulty in grasping either concept and did not need as much practice in the skills as they were actually given. By the end of lesson 4, they were becoming bored with the repetitive practice and this lesson could have been shortened by a 1/2 hour, thus making the intervention programme only 2 1/2 hours in length. It must be remembered, however, that this was the top streamed Std 6 class in the school.

6.4.4. General Comments.

1. The growth in self-confidence in handling English text was quite marked. This was confirmed by the observer.
2. At no stage did any pupil ask for an explanation of difficult words in the passages. This appears to indicate that their range of vocabulary is larger than is normally assumed.
3. Pupils learned to concentrate on the text closely in order to isolate keywords and pick out topic sentences.
4. Levels of concentration improved markedly.
5. An enthusiastic response to the programme was

obvious and the pupils appeared to enjoy controlling the pace of their own learning.

6. Restructuring the physical arrangement of the classroom was necessary so that pupils could work in cooperative groups.

6.4.5. Conclusion.

The intervention programme was generally enthusiastically received by the pupils and the class teacher. The class teacher has spoken to the rest of the English staff at the school and many teachers are keen to implement the programme in 1991. The fact that it can be utilised in any subject was received with interest and other staff members will also carry it out in their subjects, using material chosen from the type of text relevant to their individual subjects.

The pupils, themselves, were observed to gain confidence in their own ability to handle the task set for them and the majority of pupils appeared to enjoy the learning experience.

6.5. Post-test.

6.5.1. Introduction.

The passage chosen for the post-test was Disappearing Habitats (see Appendix 6(a)). This passage was measured at level 5-6 on the Dale-Chall Readability Test, thus matching the level of the pre-test passage. Appendix 6(b) gives a list of unfamiliar words according to the Dale-Chall list of 3000 words familiar to 80% of 4th grade American children. From this list 3 words were repeated (and thus counted each

time as a difficult word) and 3 words were considered unproblematic by Mr Blacquiere and the researcher, and were thus excluded from the final computer calculation of readability. Appendix 6(c) is the original computer print-out of the readability scores according to the computer programme of the University of Natal.

6.5.2.Administration of the Test.

The test was given to both the experimental and control groups on 23 August 1990 in consecutive 1/2 hour periods during a normal school day. Thirty-four pupils were present in the experimental group, 6A and thirty-five pupils in the control group, 6B. The time allotted to the test was 20 minutes.

The pupils were given the passages and a sheet of paper on which to write out the topic sentences. Exactly the same instructions were given as for the pre-test.

6.5.3.Conditions Under Which the Test Was Administered.

There were no distractions on this day. The control group showed signs of restlessness and were not concentrating as well as they had in the pre-test. This could be an indication that they did not see the point of repeating an exercise they had already mastered the previous week. A few pupils from the control group expressed concern about how the results of the test were to be used and needed reassurance of the confidentiality of the results before settling down to the task in hand.

The experimental group completed the task efficiently and in complete silence. Some pupils even covered up their work to prevent others from seeing what they

were doing. This seems to indicate that having learned the skills co-operatively, the individualistic competitive nature encouraged by the current education system returns with the administration of a "test". Thirteen pupils finished the exercise in under 12 minutes and the confidence in the pupils' approach was marked.

6.5.4. Scoring of the test

Appendix 6(d) indicates the method of scoring arrived at through consultation with other teachers. The test was marked in the same manner as the pre-test and the result was brought to a percentage for ease of comparison.

6.5.5. Results

For a discussion of the results see Chapter 7.

6.5.6. Conclusion

A marked improvement in the performance of the experimental group was obtained in the post-test. This is discussed fully in Chapter 7 of this dissertation.

6.6. Summaries

6.6.1. Introduction

Although it was not part of the original research design, both the researcher and the experimental class teacher were keen to see what effect the teaching of skills of finding keywords and topic sentences with the resultant close focus on the text, would have on the pupils' ability to summarise a given passage in

their own words. Consequently it was decided that the class teacher would carry out this exercise in the week following the completion of the research programme and without the researcher being present.

6.6.2.Method Used

The passage National Parks (see Addendum 2) was chosen for this exercise. The following steps were carried out:

1. The teacher read the passage to the class. Each pupil had been given a copy of the passage.
2. The pupils were asked to underline the keywords
3. The pupils were asked to identify the topic sentences and rewrite them on a separate sheet of paper.
4. The original passage was then taken away from the pupils.
5. The pupils were then instructed to select the keywords from the topic sentences and rewrite them on another sheet of paper.
6. The papers containing the topic sentences were then removed.
7. The pupils were told to write a summary of the passage they had read using the keywords they had written down from the topic sentences.
8. The summaries were collected and given to the researcher.

6.6.3.Teacher Observations

The pupils tackled the steps 1-5 with confidence and ease. There was initial consternation expressed when the teacher instructed them to do the summary from the keywords in front of them, but they settled down and tackled the task with confidence.

6.6.4. General Impressions of the Summaries

Every pupil expressed herself clearly and in correctly formed sentences. The researcher together with the teacher graded the summaries using the following system of grading:

- Excellent : Main points all included. Good use of language. Coherence and control of language good. Very good grasp of content.
- Good : Good grasp of content. Coherent paragraph. Language control good. Missing a few points.
- Average : Coherent good paragraph. Missing some points. Quite close to the original wording.
- Poor : Main points definitely not all included. Content not coherent. Shows language and structure errors. Still in isolated sentences and not a paragraph.

On the above grading system 7 summaries were assessed as excellent, 13 very good, 4 average and 10 poor. Thus 24/34, or 70,5% of the pupils from the experimental group succeeded in writing a coherent summary without any formal teaching. Examples of each grade of summary as submitted by the experimental group are included as Addenda (see Addenda 3). The summaries were also shown to two English teachers involved with Std 6 at Black Schools for their independent assessment and both agreed with the researcher's assessment. Both teachers also commented on the control of language and the smooth use of coherent sentences used by the pupils. Both agreed that the use of language was above the normal usage shown by Black Std 6 pupils.

6.6.5. Conclusion

The assessment of any summary is, of necessity, a subjective one, but the class teacher and independent teachers all agreed that the summaries presented by these pupils were very much better than the work normally presented by Std 6 pupils. It would appear that the teaching of skills such as the selection of keywords and topic sentences using the methods of mediation, group work and discussion outlined earlier aids the pupils in the making of summaries of passages.

CHAPTER 7

7.DISCUSSION OF RESULTS

7.1. Introduction

The overall results of the post-test administered to the experimental and control groups showed a significant improvement in the experimental group and a minimal improvement in the control group.

7.2. Discussion of overall results.

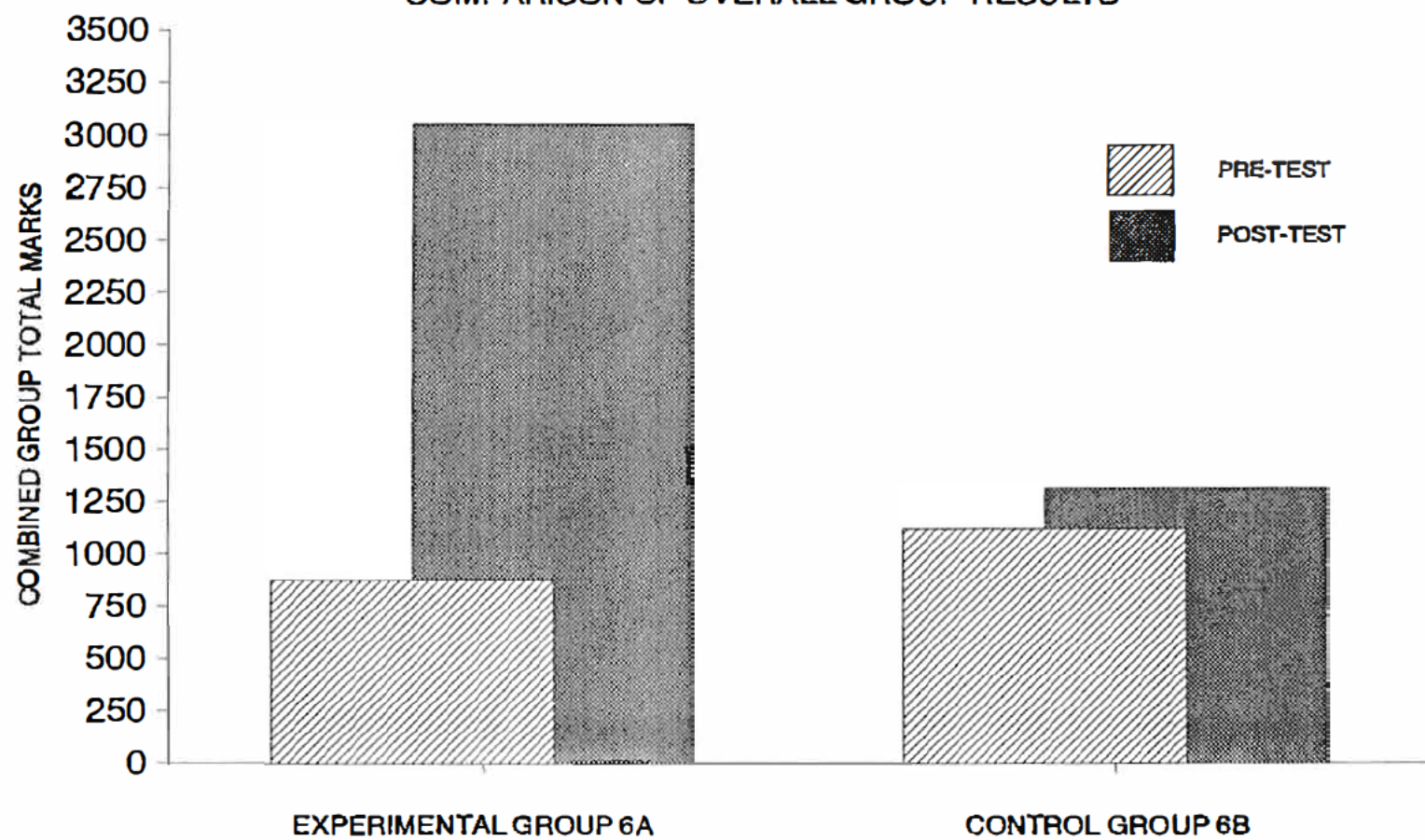
7.2.1 Table 5 : Comparison of overall group results

Table 5 shows the overall comparison of the combined percentage scores of the experimental and control groups. The experimental group 6A achieved a combined score of 894 on the pre-test and 3056 on the post-test, thus showing an increase of 2162. The average % obtained in the pre-test was 25,5% and in the post-test 89,8%, thus showing a significant improvement.

The control group 6B achieved a combined score of 1121 on the pre-test and 1313 on the post-test, an increase of 192. The average % obtained in the pre-test was 32% and in the post-test 37,5%. The slight improvement is not considered to be significant and can be ascribed to the fact that the children were doing the same type of test for the second time in a period of 10 days.

TABLE 5

COMPARISON OF OVERALL GROUP RESULTS



7.2.2 Statistical significance of results.

Using the Man-Whitney U test and allowing for ties as per Table 6, the value of Z was calculated as 7,126 and it was found that this value exceeded the critical value of 1,645 found in the normal standard distribution table. (Cass 1973). It can thus be concluded that the null hypothesis

$H_0 : G_b \geq G_a$

(i.e. that the results of the control group, 6B are greater than or equal to the results obtained by the experimental group 6A)

can be rejected in favour of the alternative hypothesis

$H_a : G_b < G_a$

(i.e. that the results of the control group 6B are less than those obtained by the experimental group 6A)

It is statistically significant that the results of the experimental group 6A were higher than the control group 6B.

7.2.3 Table 1 : Frequency distribution of results of pre- and post-tests : Experimental group 6A

Table 1 shows that in the pre-test the whole of the experimental group 6A fell into the 0-60% range while in the post-test the whole group fell into the 61-100% range with 32 out of 34 children in the 81-100% range - a significant improvement in results. In the pre-test 28 out of 34 children scored below 40% with 14 with scores below 20%. In the post-test no child scored below 60% and 32 scored above 80%.

TABLE 6

DIFFERENCE BETWEEN SCORES OF PRE-TEST AND POST-TEST

<u>Experimental Group (6A)</u>		<u>Control Group (6B)</u>	
<u>Difference in scores/Rank order</u>		<u>Difference in scores/Rank order</u>	
35	35	-23	1
48	37,5	-12	2
48	37,5	-11	8
49	40	- 8	4
49	40	- 7	5,5
49	40	- 7	5,5
50	42	- 6	7,5
51	43	- 6	7,5
52	44	- 3	9,5
54	45	- 3	9,5
57	46	- 2	11,5
58	47	- 2	11,5
63	48	- 1	13
64	49,5	0	14
64	49,5	1	15,5
65	52	1	15,5
65	52	2	17
65	52	3	18
66	54	4	20
67	55	4	20
68	56	4	20
71	57	6	22
73	58	7	23
74	59,5	10	24
74	59,5	13	25,5
76	61	13	25,5
77	63	14	27
77	63	16	28,5
77	63	16	28,5
78	65,5	18	30
78	65,5	19	31,5
79	67,5	19	31,5
79	67,5	33	33,5
80	69	33	33,5
		47	36

TABLE 1

FREQUENCY DISTRIBUTION OF RESULTS OF PRE-
AND POST- TESTS: EXPERIMENTAL GROUP 6A

CLASS INTERVALS	PRE-TEST	POST-TEST
0 - 20	14	0
21 - 40	14	0
41 - 60	6	0
61 - 80	0	2
81 - 100	0	32

TABLE 2

FREQUENCY DISTRIBUTION OF RESULTS OF PRE-
AND POST- TESTS: CONTROL GROUP 6B

CLASS INTERVALS	PRE-TEST	POST-TEST
0 - 20	9	8
21 - 40	16	16
41 - 60	8	6
61 - 80	2	5
81 - 100	0	0

7.2.4 Table 2 : Frequency distribution of results of pre- and post-tests : Control group 6B

In the pre-test 33 children scored below 60% and only 2 fell within the 61-80% range. In the post-test 30 children fell within the 0-60% and 5 within the 61-80% range. The majority of the children (16) were grouped in the 21-40% range in the pre- and post-tests and no children scored in the 81-100% range in either test. It can be concluded that no significant increase in overall marks occurred within the group.

7.2.5 Table 3 : Comparison of results of experimental group 6A

Table 3 shows the comparison between each individual child's results on the pre- and post-tests. Each child shows a significant improvement between the two tests and there are no regressions.

7.2.6 Table 4 : Comparison of results of control group 6B

No definite pattern of increase or regression is shown in the comparison between the results obtained in the pre- and post-tests. Children 13, 19, 23 and 34 show significant increases in scores obtained and children 6, 10, 12, 16, 18, 20, 24, 26, 27 and 28 show regression. The slight increase might be ascribed to the practice obtained in doing two similar tests within 10 days of each other or to a better understanding of what was required in the tests. The children at Sukuma share accommodation in the hostels and the girls in the control group might well have discussed the tests with friends in the experimental group. The pupils in the experimental group were allowed to take the passages away with them to the hostels and it is possible that

TABLE 3

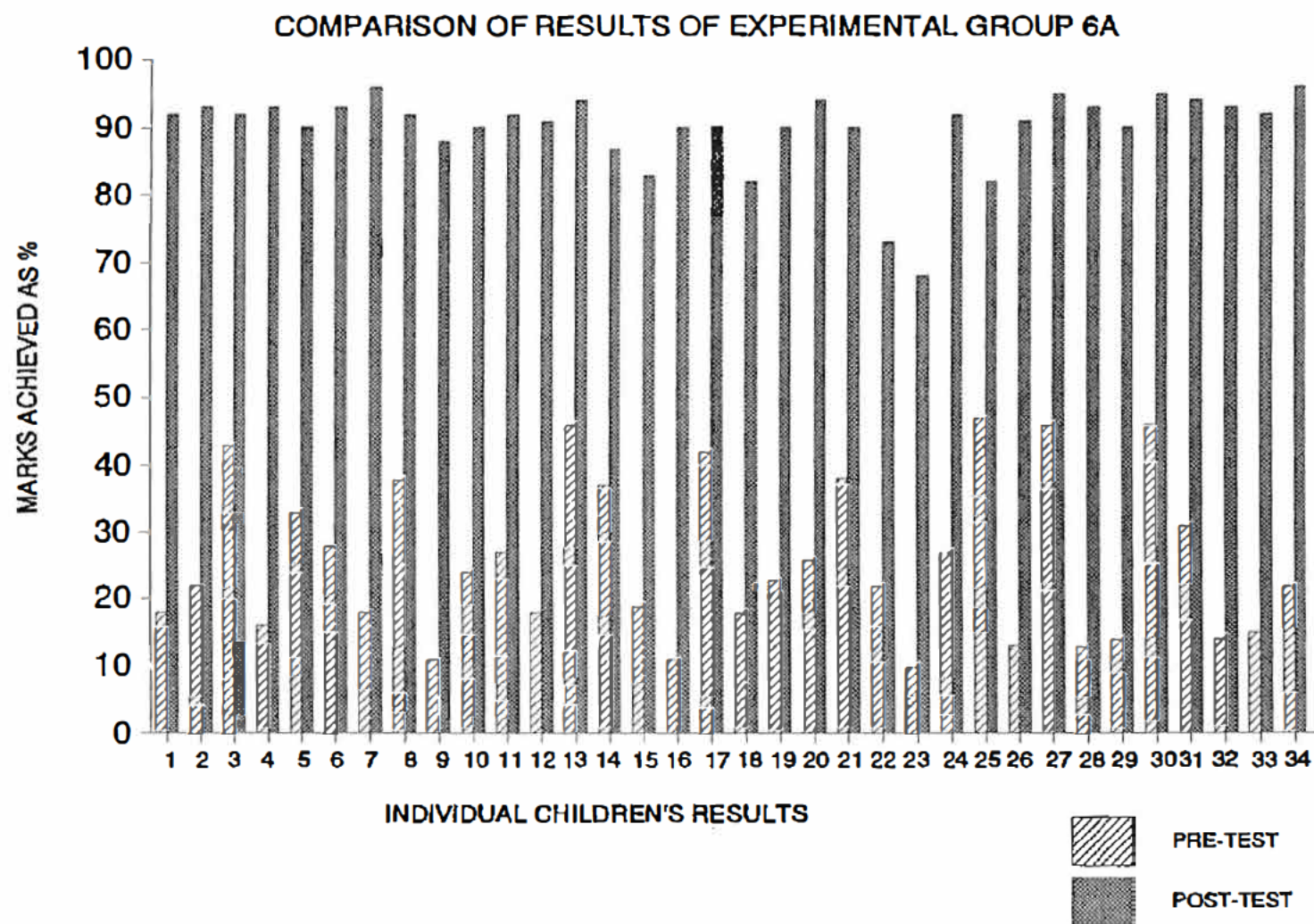
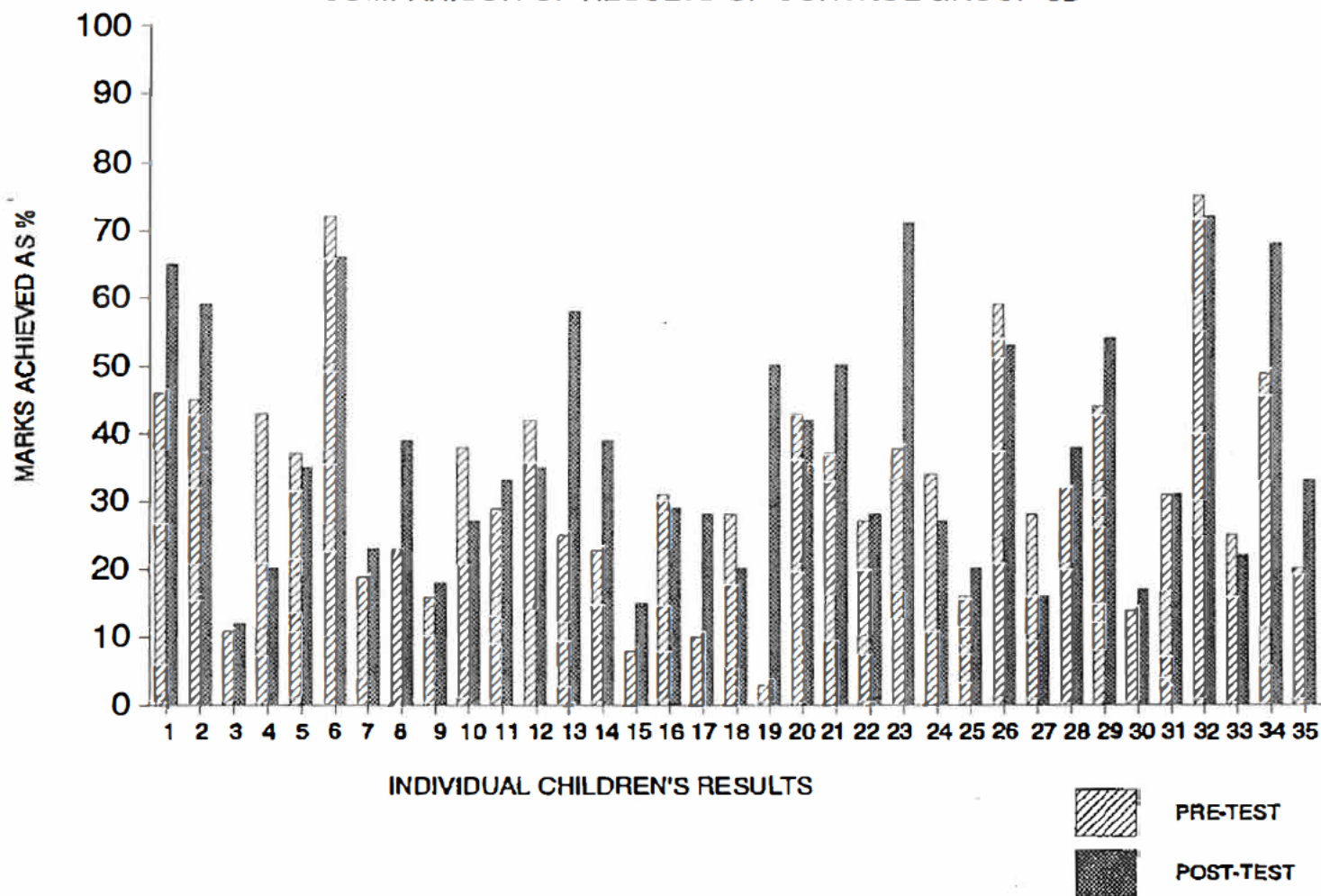


TABLE 4

COMPARISON OF RESULTS OF CONTROL GROUP 6B



the actual programmes could have been discussed with pupils in the control group, thus accounting for individual improved results. The individual improved results were not considered to have compromised the overall results of the programme.

7.3. Conclusion

The results of the post-test revealed a significant improvement in the experimental group's performance with the average % obtained increasing from 25,5% to 89,8% overall. It can thus be concluded that the intervention programme was successful in teaching the pupils how to identify keywords and pick out topic sentences from a given passage of text of a readability level of 5-6 as measured on the Dale-Chall index of readability of text.

CHAPTER 8

8.CONCLUSIONS

The field of reading comprehension is a vast one and many approaches have been suggested for overcoming the problems encountered by children. The difficulties encountered by the children in Black Education are compounded by other problems such as poor initial teaching, underqualified teachers, large classes, inadequate exposure to text, lack of library facilities and a second language medium of instruction. Donald's model of the interactive nature of reading problems found in Homo Legens of 1980 illustrates this situation well. This dissertation attempts to address two aspects of reading comprehension, that is, the teaching of the skills of isolating keywords and topic sentences in an effort to get pupils to focus narrowly on the text and thus aid their comprehension of the text.

Many different approaches to the teaching of reading have been put forward such as the phonic approach, word recognition approach and the language experience approach. Jeanne Chall proposes that children go through specific stages of reading and postulates that children can remain at a certain level of reading and will not progress to the higher levels if there is insufficient suitable reading matter available or if the exposure to text is insufficient. Building upon this theory, the research programme attempted to choose material suitable to the estimated level of reading of the children and to provide practice in the necessary skills to allow the children to progress. However, more research is needed in ascertaining the exact reading levels of the children and then focusing attention specifically on practice reading using

suitably graded material to see if the reading level of the children can be improved.

The intervention programme was based upon addressing a specific need in Black education, that is, the difficulties encountered by Std 6 pupils in comprehending English text. Mediation was provided in the form of modelling and intervention by the researcher and was aimed at the pupils attaining mastery over the task in hand, perceived self-efficacy and autonomous learning. Although the aspect of transfer of the skills taught was not specifically addressed, a further test was carried out after the post-test had been administered in which the pupils were asked to use the skills of selection of keywords and topic sentences to write a summary of a given passage. The evidence suggested a high level of retention and transfer, but further research needs to be carried out in this area to see whether, in fact, the success achieved by the programme is applicable to other groups of pupils and to other subject areas.

The passages used in this piece of research were chosen by the researcher together with other teachers in Black education. The individual interest levels of the pupils could, however, not be taken into account. The passages were then assessed for reading levels using the University of Natal's computer programme of readability and matched according to the Dale Chall (1948) test of readability levels. The passages were all of level 5-6, that is, suitable for American children of 10-11 years of age. Not all teachers in Black education or any other education department would have access to the University programme and it would be interesting to attempt to assess the readability of text according to the cloze procedure without being reliant on a computer programme. This has not been attempted, to the writer's knowledge, in

Black education, although the procedure is commonly used in the White Primary Schools.

The two groups chosen for this research programme were matched as far as was possible within the confines of the school's streaming programme as far as age, sex and background were concerned. The questionnaire administered to the children in an attempt to assess their reading background showed that the access to books, reading patterns and familiarity and exposure to text were basically the same for both groups. The analysis of the questionnaire raised some interesting issues about the children's:

- exposure to text
- reading habits
- use of libraries
- amount of time spent on reading
- source of reading matter
- language preference in reading

which are worthy of further research, but fell outside of the limits of this dissertation.

In an attempt to quantify the results of the pre- and post-tests and thus obtain an objective measure of comparison, the researcher collaborated with other teachers to pick out key words and topic sentences from the text passages as "acceptable" answers, even though it had been stressed throughout the mediated learning experience that there were no "right" or "wrong" answers. This could be considered to be a flaw in the research design and raises the issue of whether quantifiable data can ever be a true assessment of comprehension. However, under the given circumstances, it was decided that this assessment was permissible in order to judge the success of the programme as a whole.

Several interesting points came to light during the teaching of the programme:

1. Many children did not know what a sentence was, even though they had been exposed to a minimum of 7 years of schooling already.
2. Pupils showed no undue concern over unfamiliar words in the given passages and no vocabulary questions were asked at all.
3. Group learning and cooperative learning techniques were adopted and enjoyed by the pupils, but when they were asked to work on the practice passages they immediately reverted to the traditional, individualistic style of learning. In the post-test many children covered up their work to prevent copying and a highly competitive atmosphere of learning returned to the classroom.

The styles of learning within the classroom are worthy of further attention and research and, in particular, the way in which reading comprehension is tackled in the classroom. Possibly too much attention is paid to answering contextual questions and too much emphasis on understanding every individual word. This aspect of teaching reading comprehension appears to warrant further investigation.

The Std 6 pupils benefited from the exposure to this type of learning programme and the growth in self-confidence and directed approach to English text was marked. There was also a significant improvement in their level of concentration. The experimental group became a little too over-confident in their ability to handle the task set and showed a degree of boredom when asked to do the last practice exercise. This could be attributed to the fact that they were the top streamed group and therefore grasped the concept readily and did not need as much practice as

they were given; thus pointing to the need for a programme which was more flexible and allowing the individual to decide how much practice s/he needed. The intervention programme could easily be adapted to this method of learning and this would be an area worthy of further research.

The follow-up test in which the children were asked to summarise the passage using the skills they had acquired, revealed that the growth in self-confidence extended to an unfamiliar instruction and every child handed in a coherent summary. The assessment of the summary was collaborative and thus as objective as possible, but there is a need for further research to be done in this area to see if the ease and control of language revealed in this exercise was just because the class was a "good" class with superior language skills or whether the results achieved can be replicated using another group. The programme's results do indicate, however, that this approach could be used as the basis for teaching additional skills both in language and other subject areas.

The significant results achieved in the programme with an improvement in average % obtained from 25,5% to 89,8% in the experimental group showed that this mediation programme was highly successful with this particular group. Whether this was attributable to good teaching, a good programme or the changed style of teaching cannot be assessed. The programme is easy to replicate and it is hoped that it will be tested more widely by other teachers in the field and that research will be carried out to assess the transfer of the skills learned. A core of passages suitable for use in Std 6 classes in Black education has been included in the addenda, but it is hoped that this programme can be adapted for use at any level and in any education department.

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APPENDIX 1: AGE AND SATB RAW SCORES: EXPERIMENTAL**GROUP 6A**EXPERIMENTAL GROUP (6A)

		Age in Years and Months as at July 1990	SATB Raw Score (English) /25
Child	1	15 years 10 months	23
Child	2	14 years 6 months	22
Child	3	12 years 11 months	21
Child	4	12 years 2 months	22
Child	5	13 years 2 months	22
Child	6	13 years 3 months	21
Child	7	13 years 11 months	23
Child	8	13 years 6 months	19
Child	9	14 years 5 months	24
Child	10	12 years 7 months	25
Child	11	13 years 3 months	18
Child	12	16 years	16
Child	13	13 years 11 months	21
Child	14	13 years 3 months	21
Child	15	12 years 11 months	22
Child	16	13 years 3 months	25
Child	17	13 years 7 months	21
Child	18	13 years 8 months	23
Child	19	14 years 5 months	25
Child	20	14 years 3 months	24
Child	21	14 years 5 months	24
Child	22	13 years 4 months	18
Child	23	12 years 9 months	22
Child	24	14 years 4 months	17
Child	25	12 years 8 months	24
Child	26	14 years 3 months	23
Child	27	13 years 9 months	23
Child	28	13 years 1 month	20
Child	29	13 years 7 months	22
Child	30	14 years	22
Child	31	12 years 6 months	21
Child	32	12 years 11 months	23
Child	33	13 years 1 months	24
Child	34	14 years 4 months	23

APPENDIX 2: AGE AND SATB RAW SCORES: CONTROL GROUP 6BCONTROL GROUP (6B)

		Age in Years and Months as at July 1990	SATB Raw Score (English) /25
Child	1	14 years 1 months	17
Child	2	13 years 4 months	absent from test
Child	3	13 years 11 months	20
Child	4	12 years 7 months	23
Child	5	14 years 8 months	22
Child	6	13 years 7 months	21
Child	7	13 years 5 months	17
Child	8	13 years 2 months	20
Child	9	14 years 9 months	21
Child	10	13 years 3 months	22
Child	11	14 years 1 month	20
Child	12	12 years 9 months	20
Child	13	15 years 7 months	absent from test
Child	14	13 years 6 months	16
Child	15	13 years 8 months	22
Child	16	16 years 6 months	22
Child	17	13 years 5 months	21
Child	18	14 years 10 months	22
Child	19	14 years 8 months	21
Child	20	13 years 7 months	19
Child	21	13 years 10 months	21
Child	22	12 years 1 months	23
Child	23	13 years 6 months	20
Child	24	14 years 3 months	13
Child	25	14 years 8 months	16
Child	26	13 years 11 months	18
Child	27	16 years	13
Child	28	15 years 6 months	17
Child	29	12 years 6 months	23
Child	30	12 years 4 months	21
Child	31	13 years 11 months	21
Child	32	12 years 8 months	18
Child	33	15 years 11 months	15
Child	34	13 years 4 months	13
Child	35	13 years 7 months	22

APPENDIX 3: PILOT QUESTIONNAIRE**QUESTIONNAIRE FOR M.ED. DISSERTATION**

Fill in the following information as carefully and honestly as you can. This is not a Test of any kind and the information will be treated as confidential and used only as a piece of research towards a Masters Degree in Education. Please PRINT.

1. Name in full :
2. Home Address :
.....
3. Date of Birth :
4. Sex :
5. School :
6. Standard :
7. Occupation of Parent(s) : Father :
Mother :
Guardian :
8. Number of brothers and sisters :
9. When you are not at School, who looks after you?
10. Underline the word/words which best describe how you feel about reading a book :

Very keen, keen, enjoy reading sometimes, seldom read, hate reading, no time to read.
11. Approximately how many books do you have in your home - underline the figure which is closest in your estimation :

No books, 20 books, 50 books, 100 books, 200 books, more than 200
12. Fill in next to each of the items mentioned below whether you read them regularly, sometimes, seldom or never :

Newspapers	.....
Magazines	.....
Comics	.....
Photo Stories	.....
Plays	.....
Poetry	.....
Short Stories Books (Novels)	.....
Non-Fiction	.....

13. How much time do you spend a week reading other books apart from your School Books? :

.....

14. How many books (apart from School Setworks) have you read in the last month :

.....

15. Place a tick opposite the source/sources from which you obtained any material you have read in the past month :

School library	.....
Public library	.....
Books in the home	.....
From friends	.....
From magazines	.....
The newspaper	.....
A teacher	.....
Have not read anything yet	.....

16. Tick which language you would prefer to read in. (You may tick more than one if you like to read in more than one language) :

English	.....
Afrikaans	.....
Zulu	.....
Any other African language	.....

APPENDIX 4: FINAL QUESTIONNAIREQuestionnaire For M.Ed. Dissertation

Fill in the following information as carefully and honestly as you can. This is not a test of any kind and the information will be treated as confidential and used only as a piece of research towards a Masters Degree in Education. Please PRINT.

1. Name in full :

2. Home address :
.....
.....

3. Date of birth :

4. Sex :

5. School :

6. Standard :

7. Underline the word/words which best describe how you feel about reading a book:

Love reading, enjoy reading sometimes, don't often read, hate reading, no time to read.

8. Approximately how many books do you have in your home? Underline the figure which is closest in your estimation:

No books, 20 books, 50 books, 100 books, 200 books, more than 200 books.

9. Fill in next to each of the items mentioned below whether you read them every day, sometimes or never:

Newspapers	.....
Magazines	.....
Comics	.....
Photo Stories	.....
Plays	.....
Poetry	.....
Short stories/novels	.....
Non-fiction	.....

10. Underline the closest amount of time you spend a week reading anything other than your school books:

no time, less than 30 minutes, 30 minutes, 1 hour,
2 hours, more than 2 hours.

11. Ring the number of books (not including your school networks) that you have read in the last month:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, more than 10.

12. Place a tick opposite the source/sources from which you obtained any material you have read in the past month:

School library	.....
Public library	.....
Books in the home	.....
From friends	.....
From magazines	.....
The newspaper	.....
A teacher (not the librarian)	.....
Have not read anything yet	.....

13. Tick which language you like to read in. (You may tick more than one if you like to read in more than one language):

English	.....
Afrikaans	.....
Zulu	.....
Any other African language	.....

APPENDIX 5a: PRE-TEST PASSAGE: THERE IS HOPE**THERE IS HOPE!**

Ever since people have lived on earth, they have used animals and plants to give them everything they need. Animals are killed for meat and skin, trees are cut down for paper, plants are uprooted for food, minerals are dug from the ground.

We know now that the supply of animals and plants is not endless. If we go on using nature as thoughtlessly as we have been doing, there will soon be nothing left. So nature has to be looked after. If it is carefully looked after, there's no reason why it shouldn't last as long as there's life on earth.

Taking care of nature means trying to keep a balance between the needs of people and the needs of wildlife. The world has to be shared. People everywhere are realising that wild animals, wild plants and wild places need to be saved. We need them not just to look at and enjoy. We need them because they provide us with food and oxygen. If they don't survive, we can't either!

At one time, the wisent, the American alligator and the tuatara were in great danger of extinction. But they were saved. They are still with us in the world.

There is hope for many of the animals and plants in danger today. We know it's possible to save them. We must do our best.

Source : Childcraft V 4 Nature in danger 1989. World Book, U.S.A. P. 152-153.

APPENDIX 5b: PRE-TEST PASSAGE: LIST OF WORDS NOT
INCLUDED IN DALE-CHALL LIST OF FAMILIAR WORDS

THERE IS HOPE

uprooted
minerals
supply
endless
nature
thoughtlessly
balance
wildlife
realising
provide
oxygen
survive
wisent
tuatar
extinction

No words excluded

APPENDIX 5c: PRE-TEST PASSAGE: COMPUTER PRINT OUT OF
READABILITY SCORES

CURRENT PASSAGE		"hope"	
229	WORDS	306.17	SYLLABLES
15	3-SYLLABLE WORDS	133.70	SYLLABLES PER 100 WORDS
19	SENTENCES	8.30	SENTENCES PER 100 WORDS
	7.44		FOG READING LEVEL
	81.49		FLESCH READING EASE SCORE
	5		FLESCH GRADE LEVEL
	4.82		POWERS READING EASE
	4.91		HOLMQUIST
	4.20		ARI
	4.89		FLESCH-KINCAID
	6.21		COLEMAN
	5-6		DALE-CHALL

DO YOU HAVE MORE MATERIAL? (YES OR NO)?

APPENDIX 5d: MARKING MEMORANDUM FOR SCORING OF
PRE-TEST

PRE TEST

THERE IS HOPE

LENGTH: 229 words.

LEVEL: 5-6.

KEY WORDS:

people lived earth used animals plants
give everything need animals killed meat
skin trees cut paper plants uprooted food
minerals dug ground

Topic sentence: Ever since people have lived on earth,
they have used animals and plants to give them
everything they need.

we know supply animals plants is not
endless we using nature thoughtlessly will
be nothing left nature looked after last
long

Topic sentence: We know now that the supply of animals
and plants is not endless.

taking care nature means keep balance needs
people wildlife world shared people are
realising animals plants places need saved
we need them look at enjoy provide food
oxygen they don't survive we can't

Topic sentence: Taking care of nature means trying to
keep a balance between the needs of people and the
needs of wildlife.

wisent alligator tuatara danger extinction
they were saved

Topic sentence: But they were saved.

hope animals plants danger we know save
them best

Topic sentence: There is hope for many of the animals
and plants in danger today.

Number of key words: 88

Number of topic sentences: 5

Total score: 93

Individual scores to be represented as percentages.

APPENDIX 6a: POST-TEST PASSAGE: DISAPPEARING HABITATSDISAPPEARING HABITATS

Everywhere in the world people are using up more and more land. In many places an area of forest is cut down to make room for crops. When all the goodness in the soil has been used up, the people move on to another place. They leave the forest to grow back again. But this takes time.

Large herds of sheep and cattle need space to graze. They eat all the grass. Then, when there's none left, they eat any roots or leaves they can find. They trample the earth until it's hard. The soil becomes bare and dusty like a desert.

Everything people do seems to need more land. Lots of land is used for building. And more is changed so that the farmers can make the best use of it. They clear away hedges, streams, ponds, marshes and trees. They make it easier to farm with big machines. Those creatures and plants which lived in the hedges and marshes are homeless now. And those that stay are often destroyed by poisonous sprays.

In the thick forests of Brazil there may be some kinds of animals we've never seen. They may have lived there for hundreds, even thousands of years in the safety of the trees. Now a path is being cut through the forests for the Trans-Amazonian highway. The rain forest is disappearing so fast that scientists believe some animals that live there will become extinct even before they have been discovered!

Source : Childcraft V. 4 Nature in danger 1989. World Book, U.S.A. P. 55.

APPENDIX 6b: POST-TEST PASSAGE: LIST OF WORDS NOT
INCLUDED IN DALE-CHALL LIST OF FAMILIAR WORDS

DISAPPEARING HABITATS

disappearing

habitats

area

herds

trample

hedges

marshes

easier

creatures

homeless

poisonous

sprays

Brazil

Trans-Amazonian

scientists

extinct

Words repeated = 3

Words removed = 3 (area, Brazil and Trans-Amazonian)

Total = 6 exclusions

APPENDIX 6c: POST-TEST PASSAGE: COMPUTER PRINT OUT OF
READABILITY SCORES

CURRENT PASSAGE		"a:habitats"	
246	WORDS	344.40	SYLLABLES
15	3-SYLLABLE WORDS	140.00	SYLLABLES PER 100 WORDS
21	SENTENCES	8.54	SENTENCES PER 100 WORDS
	7.12		FOG READING LEVEL
	76.51		FLESCH READING EASE SCORE
	6		FLESCH GRADE LEVEL
	5.08		POWERS READING EASE
	4.65		HOLMQUIST
	4.95		ARI
	5.50		FLESCH-KINCAID
	7.30		COLEMAN
	5-6		DALE-CHALL

DO YOU HAVE MORE MATERIAL? (YES OR NO)?

APPENDIX 6d: MARKING MEMORANDUM FOR SCORING OF
POST-TEST

POST-TEST

DISAPPEARING HABITATS

LENGTH: 246 words.

LEVEL: 5-6.

KEY WORDS:

everywhere world people using up land places

forest cut down crops goodness soil used up

people move leave forest grow takes time

Topic sentence: Everywhere in the world people are
using up more and more land.

herds sheep cattle space graze eat grass
none
left eat roots leaves trample earth hard
soil
becomes desert

Topic sentence: The soil becomes bare and dusty like a
desert.

everything people do need land used
building changed farmers make use clear
hedges streams ponds marshes trees make
easier farm machines creatures plants lived
hedges marshes homeless stay destroyed
sprays

Topic sentence: Everything people do seems to need more land.

forest Brazil may be animals we've never
seen lived years safety trees path cut
forests Trans-Amazonian highway rain forest
disappearing fast scientists believe animals
live become extinct before discovered

Topic sentence: The rain forest is disappearing so fast that scientists believe some animals that live there will become extinct even before they have been discovered.

Number of key words: 94

Number of topic sentences: 4

Total score: 98

Individual scores to be represented as percentages.

**ADDENDUM 1.1a: SAMPLE PASSAGE: STALACTITES AND
STALAGMITES**

STALACTITES AND STALAGMITES

Many caves and caverns are filled with what look like giant stone icicles. Some of these 'icicles' hang down from the roof of the cave. Others stick up from the floor. They are often as thick as tree trunks. These strange-looking cone shapes are usually found in limestone caverns.

The cones that hang from the ceiling are called stalactites. They are made by water trickling through cracks in the roof of a limestone cavern. The water is full of tiny bits of mineral called calcite. As some of the water dries it leaves bits of calcite stuck to the ceiling. Each drop of water leaves more calcite, and a cone begins to grow.

On the floor of the cavern, the same thing is happening, but the other way round. As the water from the roof drips on to the floor little piles of calcite grow higher. These cones sticking up from the floor are called stalagmites.

Often water drips off the end of a stalactite onto the top of a stalagmite underneath. Very slowly the two grow towards each other until they finally join.

Many people get stalactites and stalagmites mixed up. But there's an easy way to remember which is which. Just remember that ceiling begins with c and stalactite has the letter c in it. And ground starts with g and stalagmite has the letter g in it.

SOURCE: CHILOCRAFT V.6 : OUR WORLD 1989.
WORLD BOOK, USA. P.103

ADDENDUM 1.1b: SAMPLE PASSAGE: LIST OF WORDS NOT
INCLUDED IN DALE-CHALL LIST OF FAMILIAR WORDS

STALACTITES AND STALAGMITES

stalactites

stalagmites

caverns

icicles

usually

limestone

trickling

mineral

calcite

stuck

underneath

c

g

Words repeated = 16

c & g removed = 4

Total = 20 exclusions

ADDENDUM 1.1c: SAMPLE PASSAGE: COMPUTER PRINT OUT OF
READABILITY SCORES

CURRENT PASSAGE		"a:stala"	
235	WORDS	331.54	SYLLABLES
19	3-SYLLABLE WORDS	141.08	SYLLABLES PER 100 WORDS
19	SENTENCES	8.09	SENTENCES PER 100 WORDS
	8.18		FOG READING LEVEL
	74.92		FLESCH READING EASE SCORE
	6		FLESCH GRADE LEVEL
	5.18		POWERS READING EASE
	4.61		HOLMQUIST
	5.44		ARI
	5.88		FLESCH-KINCAID
	7.63		COLEMAN
	4th OR LESS		DALE-CHALL
DO YOU HAVE MORE MATERIAL? (YES OR NO)?			

ADDENDUM 1.2a: SAMPLE PASSAGE: BRIDGES IN THE SKYBRIDGES IN THE SKY

Long ago people thought that rainbows were magical. Some people actually believed that the rainbow was a bridge that appeared in the sky when the gods wanted to leave heaven and visit the earth. People also believed that if you could find the place where the rainbow touched the ground, you would find a pot of gold buried there.

Today we know that a rainbow is simply caused by sunlight shining on raindrops. To see a rainbow you must stand with the sun behind you, and the rain falling in front of you.

Sunlight looks colourless, but it is really made up of many colours. When sunlight enters a single raindrop it divides into violet, blue, green, yellow, orange and red. The raindrop reflects these colours like a mirror. Because the colours blend into each other at their edges, we can usually see only four or five of them.

Many rays of sunlight, breaking up into colours and reflecting off thousands of raindrops, make a shimmering, curved rainbow. Sometimes there is another very faint rainbow outside the first. The colours of the second rainbow will be the opposite order to the colours in the first rainbow.

Source : Childcraft V. 6 Our World 1989. World Book, U.S.A. P. 78-79.

ADDENDUM 1.2b: SAMPLE PASSAGE: LIST OF WORDS NOT
INCLUDED IN DALE-CHALL LIST OF FAMILIAR WORDS

BRIDGES IN THE SKY

magical
actually
simply
raindrops
colourless
colour
reflects
blend
usually
reflecting
shimmering
opposite

Words repeated = 8

Total = 8 exclusions

ADDENDUM 1.2g: SAMPLE PASSAGE: COMPUTER PRINT OUT OF
READABILITY SCORES

	CURRENT PASSAGE	"a:bridges"
200	WORDS	293.64 SYLLABLES
10	3-SYLLABLE WORDS	146.82 SYLLABLES PER 100 WORDS
12	SENTENCES	6.00 SENTENCES PER 100 WORDS
	8.67	FOG READING LEVEL
	65.71	FLESCH READING EASE SCORE
	7-8	FLESCH GRADE LEVEL
	5.77	POWERS READING EASE
	4.98	HOLMQUIST
	8.43	ARI
	8.23	FLESCH-KINCAID
	9.29	COLEMAN
	5-6	DALE-CHALL

DO YOU HAVE MORE MATERIAL? (YES OR NO)?

ADDENDUM 1.3a: SAMPLE PASSAGE: ACID RAIN**ACID RAIN**

Before factories and cars were invented, the air was much cleaner than it is today. Now there are millions and millions of lorries, cars and chimneys pouring smoke and fumes into the air.

Some of the chemicals from the smoke and fumes rise up into the air, mixing with the water in the clouds and turning them acid. The rain or snow which falls from these polluted clouds will be acid. When this acid rain falls to the ground, it attacks the leaves of trees. The trees slowly lose their leaves and die. The acid rain soaks into the soil and damages the plants and crops. Acid rain also runs into lakes and rivers, killing the fish, plants and animals that live there. It can even affect the water we drink.

Many of the world's forests are suffering from the effects of acid rain, especially the pine forests in Northern Europe. Even though the forests are far from any big cities, the pollution is carried there by the wind, sometimes as far as 1,000 kilometres. So pollution from a city may fall as acid rain on a forest in another country.

Source : Childcraft V. 4 Nature in danger 1989. World Book, U.S.A. P. 123.

ADDENDUM 1.3b: SAMPLE PASSAGE: LIST OF WORDS NOT
INCLUDED IN DALE-CHALL LIST OF FAMILIAR WORDS

ACID RAIN

acid
invented
lorries
fumes
chemicals
polluted
affect
effects
especially
Europe
pollution
kilometres

Words repeated = 8

Words removed = 2 (acid and lorries)

Total = 10

ADDENDUM 1.3c: SAMPLE PASSAGE: COMPUTER PRINT OUT OF
READABILITY SCORES

	CURRENT PASSAGE	"a:acid"	
192	WORDS	267.29	SYLLABLES
11	3-SYLLABLE WORDS	139.21	SYLLABLES PER 100 WORDS
12	SENTENCES	6.25	SENTENCES PER 100 WORDS
	8.69		FOG READING LEVEL
	72.82		FLESCH READING EASE SCORE
	6		FLESCH GRADE LEVEL
	5.38		POWERS READING EASE
	4.97		HOLMQUIST
	6.98		ARI
	7.08		FLESCH-KINCAID
	7.83		COLEMAN
	5-6		DALE-CHALL

DO YOU HAVE MORE MATERIAL? (YES OR NO)?

ADDENDUM 1.4a: SAMPLE PASSAGE: FEELINGS

FEELINGS

As you grow, your face doesn't change much. It gets a bit bigger and thinner, but you still always look like you.

Your fingerprints don't change at all. But one part of you that does change from hour to hour and day to day is your feelings. You can be happy, sad, excited, quiet, cross, friendly, shy, scared or brave. One minute you might feel very grown-up. The next minute you might surprise yourself by acting younger than you are. It's all part of growing up - and it seems a muddle sometimes.

Feeling cross is not a nice feeling. It makes you upset inside. You can feel angry over lots of things. Your friend might make you cross if he doesn't play fairly, adults might make you angry by asking you to do something you don't like. Then it's easy to shout and make a fuss. The worst thing about being cross is that afterwards you often wish you hadn't acted like that, but you just can't seem to help it.

As you grow up you learn about your feelings. You can understand them better, and this helps you. But when you're young all your different feelings can muddle you. Perhaps it helps then to know that sometimes everyone feels the same.

SOURCE: CHILDCRAFT V.5 : YOUR BODY 1989.
WORLD BOOK, USA. P.146

ADDENDUM 1.4b: SAMPLE PASSAGE: LIST OF WORDS NOT
INCLUDED IN DALE-CHALL LIST OF FAMILIAR WORDS

FEELINGS

feelings

fingerprints

grown-up

muddle

adults

fuss

Words repeated = 4

Total = 4 exclusions

ADDENDUM 1.4c: SAMPLE PASSAGE: COMPUTER PRINT OUT OF
READABILITY SCORES

	CURRENT PASSAGE	"a:feelings"	
213	WORDS	288.50	SYLLABLES
10	3-SYLLABLE WORDS	135.44	SYLLABLES PER 100 WORDS
18	SENTENCES	8.45	SENTENCES PER 100 WORDS
	6.61	FOG READING LEVEL	
	80.24	FLESCH READING EASE SCORE	
	5	FLESCH GRADE LEVEL	
	4.88	POWERS READING EASE	
	4.37	HOLMQUIST	
	4.34	ARI	
	5.01	FLESCH-KINCAID	
	6.49	COLEMAN	
	4th OR LESS	DALE-CHALL	

DO YOU HAVE MORE MATERIAL? (YES OR NO)?

ADDENDUM 1.5a: SAMPLE PASSAGE: PLOTTING THE WEATHER**PLOTTING THE WEATHER**

Everyone is a weather watcher. But no one knows exactly how hot, how cold or how wet it will be tomorrow or next week - not even meteorologists.

Meteorologists are scientists who study the weather and try to forecast it. Sometimes their forecasts are wrong because the weather can change quickly.

In a way, meteorologists are like detectives. They look for all kinds of clues to help them discover what kind of weather is coming. They measure the wind speed and direction. They keep records of temperature, air pressure and the amount of water in the air. They follow the progress of storms. With radar, they can find approaching storms over 300 kilometres away.

Meteorologists also have weather 'spies' in the sky. One of these spies is a large, gas-filled balloon. The balloon carries instruments high into the sky. Wind speed, temperature and other weather conditions are automatically radioed to the weather stations below.

The highest sky spies are weather satellites. These satellites circle the earth and photograph the clouds below and any gathering storms. The pictures are then sent back to earth.

Meteorologists gather weather reports from all over the world. Using this information they draw weather maps. With the help of computers, forecasts are made and sent to weather stations and then on you.

Will it rain tonight ? Will the sun shine tomorrow
Weather forecasters try to let you know.

SOURCE: CHILDCRAFT V.6 : OUR WORLD 1989.
WORLD BOOK, USA. P.103

ADDENDUM 1.5b: SAMPLE PASSAGE: LIST OF WORDS NOT
INCLUDED IN DALE-CHALL LIST OF FAMILIAR WORDS

PLOTTING THE WEATHER

meteorologist
plotting
scientist
forecast
forecaster
detectives
clues
temperature
pressure
progress
radar
approaching
kilometres
spies
gas-filled
instruments
conditions
automatically
satellites
photograph
information
computers

Words repeated = 10

Words excluded = 2 (gas-filled and spies)

Total = 12 exclusions

ADDENDUM 1.5c: SAMPLE PASSAGE: COMPUTER PRINT OUT OF
READABILITY SCORES

	CURRENT PASSAGE	"a:weather"
234	WORDS	370.74 SYLLABLES
30	3-SYLLABLE WORDS	158.44 SYLLABLES PER 100 WORDS
23	SENTENCES	9.83 SENTENCES PER 100 WORDS
	9.20	FOG READING LEVEL
	62.47	FLESCH READING EASE SCORE
	7-8	FLESCH GRADE LEVEL
	5.80	POWERS READING EASE
	4.99	HOLMQUIST
	6.88	ARI
	7.07	FLESCH-KINCAID
	10.29	COLEMAN
	5-6	DALE-CHALL

DO YOU HAVE MORE MATERIAL? (YES OR NO)?

ADDENDUM 2a: PASSAGE USED IN SUMMARY: NATIONAL PARKSNATIONAL PARKS

Wild animals can't be saved unless their habitats are saved too. So areas of land, called national parks or reserves, are set aside, where animals and plants can live in safety.

The first national park was the Yellowstone, in the United States of America, which was set up in 1872. There are now national parks and reserves in almost every country in the world. Some of them welcome human visitors. Others don't let people in, which gives extra protection for the wildlife. There are also places in the ocean where sea animals and plants are protected.

One of the large African parks famous for its animals is the Tsavo National Park in Kenya. Visitors can drive along the roads in the park to see the animals. Sometimes the animals are so tame they don't mind if cars park quite near them. This way, people can see how lions, giraffes and elephants live in their natural habitat.

In Queensland, Australia, there's a very unusual place - not quite a zoo and not quite a reserve. This place is called Mon Repos Beach and it's where turtles lay their eggs. People can visit this beach. They watch the turtles come out of the sea and pull themselves up the sand with their flippers.

Where the sand dunes begin, the female turtle digs sand away with her flippers to make a nest. No one must talk or wriggle or take photographs, otherwise the turtle might be disturbed. But as soon as she's started to lay her eggs, people can talk and take photographs, and even touch her eggs. She doesn't mind at all. The eggs feel like slimy ping-pong balls. When she's finished laying, she covers the eggs with sand, and then just leaves them. She makes her way down to the sea again. Her eggs will be quite safe at Mon Repos!

Source : Childcraft V. 4 Nature in danger 1989. World Book, U.S.A. P. 126-127.

ADDENDUM 2b: SUMMARY PASSAGE: LIST OF WORDS NOT
INCLUDED IN DALE-CHALL LIST OF FAMILIAR WORDS

NATIONAL PARKS

national
habitats
areas
reserves
Yellowstone
human
protection
wildlife
African
famous
Tsavo
Kenya
giraffes
natural
Queensland
Australia
unusual
zoo
Mon Repos
themselves
flippers
dunes
wiggle
photographs
disturbed
slimy
ping-pong

Words repeated = 11

Words removed = 2 (African and Kenya)

Total = 13

ADDENDUM 2c: SUMMARY PASSAGE: COMPUTER PRINT OUT OF
READABILITY SCORES

CURRENT PASSAGE		"a:parks"	
310	WORDS	436.92	SYLLABLES
26	3-SYLLABLE WORDS	140.94	SYLLABLES PER 100 WORDS
23	SENTENCES	7.42	SENTENCES PER 100 WORDS
	8.75		FOG READING LEVEL
	73.92		FLESCH READING EASE SCORE
	6		FLESCH GRADE LEVEL
	5.26		POWERS READING EASE
	5.13		HOLMQUIST
	5.97		ARI
	6.30		FLESCH-KINCAID
	7.80		COLEMAN
	5-6		DALE-CHALL

DO YOU HAVE MORE MATERIAL? (YES OR NO)?

ADDENDUM 3: EXAMPLES OF PUPILS' SUMMARIESEXAMPLES OF SUMMARIES IN "EXCELLENT" CATEGORY

1. Wild animals and their habitats must be saved. So, areas of land called national parks or reserves are set aside where animals and plants can live in safety. There are some places in the ocean where sea animals and plants are protected. The large African parks famous for its animals is Tsavo national park in Kenya. Queensland in Australia is a very unusual place - not a zoo and not a reserve. People can see the turtle coming out from the sea to the sand. Where sand dunes begin the female turtle digs the sand with her flippers and make a nest. Then she lays her eggs. After that she puts the sand over the eggs and go away. The eggs are protected there.

2. So areas of land called national parks or reserves are set aside for animals and plants to live in safety. The first national park was the Yellow stone in the United State of America and was set up in 1872. Sometimes animals are tame, they don't mind if cars park quite near them. They watch turtles come out of the sea and pull themselves on the sand and their flippers. Noone should talk or wriggle or take photograph because turtle might be disturbed.

EXAMPLES OF SUMMARIES IN "GOOD" CATEGORY

1. Wild animals can't be saved if their habitat are not saved too. If you go to places near the Ocean you will see how animals can be protected. In Queensland there is a very unusual place it is not quite a zoo not quite a reserve. One large parks in Africa which is famous for its animals is Tsavo National Park in Kenya. Eggs for the turtle are quite safe when she digs for them under the sand at Mon Repos and she go back again to the sea.

2. Wild animals can't be saved unless their habits are saved too. The first national park was the yellows tone, in the United States of America, which was sent up in 1872. One of the large African parks famouse for its animals is the Tsevo National park in kenya. In Queensland, Australia there's very unusual place which is not quite a Zoo but quate a reserve. When the sand dunes begin female turtle start digs sand away with her flippers, to make the nest.

EXAMPLES OF SUMMARIES IN "AVERAGE" CATEGORY

1. Wild animals can't saved unless their habitats are saved too. There are also places in the ocean Where sea animals and plants can protected. Visitors can drive along the road in the park to see the animals.

In Queensland Australia, there's a very unussual place - not quite as zoo not quite as reserve. When sand-dunes begin, the female turtle digs sand away with her flippers to make a nest.

2. Wild animal cant be saved unless their habits are saved too. The first National park was the yellow stone in the United State of America which was set up in 1872. This was the way that people can see how lions, giraffes and elephant live in their natural habitats. People can visit the beach. The eggs feel like the slimy ping sponge ball.

EXAMPLES OF SUMMARIES IN "POOR" CATEGORY

1. Here they are trying to tell us about the saveless of animals. Others can't be save without a good place to stay. Many animals need protection. If they are not protected many thing will happen to them. There are places where wild animals are kept. They are kept in the zoo other in Queensland and Australia. There is an animal that makes nest by using its flippers.
2. Wild animals can't be saved but their habitants must be saved. In the First National Park there's a yellostone on the United State of America. Was set in 1870. The Large African Parks there was wild Animals in Tsayo Park in Kenya. In Queensland in Australia there are very many place - not quiet reserve. Sanddunes the female turtle digs the sand with her flippers to built nests.