THE ACQUISITION OF READING SKILLS IN ENGLISH BY COLOURED PRIMARY SCHOOL CHILDREN WHOSE HOME LANGUAGE IS AFRIKAANS: A DEVELOPMENTAL STUDY CONDUCTED IN A SPECIFIC SOUTH AFRICAN COMMUNITY

BY

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ABSTRACT

THE ACQUISITION OF READING SKILLS IN ENGLISH BY COLOURED PRIMARY SCHOOL CHILDREN WHOSE HOME LANGUAGE IS AFRIKAANS: A DEVELOPMENTAL STUDY CONDUCTED IN A SPECIFIC SOUTH AFRICAN COMMUNITY

PITT, Joe Harrison, PhD Rhodes University, Grahamstown, 1985

This research studies the acquisition and development of specific reading skills in English by "Coloured" primary school children for whom English is a second language. This study involves both oral and silent reading research. Developmental trends in both modes of reading are compared with those established for reading in Afrikaans in order to ascertain whether any transfer takes place from Afrikaans to English.

For analysis of data obtained from oral reading, this researcher adopted an error analysis method devised by Kenneth Goodman (1973), viz. Miscue Analysis (MA). Readers read a passage and their miscues were recorded. From the miscues this researcher established, for the different standards: the frequencies of miscues; readers' ability to associate sound and symbol; sensitivity to grammar; meaning access; and correction strategies.

In the silent reading research, readers' performances in a test battery of eight sub-tests provide insights into the presence or absence of information processing skills. Readability levels (Singer and Donlan (1980), discrimination index and facility value (Heaton 1975), and Chi-Square Statistics (Roscoe 1969) determine the development of specific reading skills, viz.: utilization of textual cues; understanding cause and effect relationships and sequence; previewing and anticipation; scanning, referring and synthesizing; understanding text structure and coherence; understanding propositional development; understanding synonymy and antonymy; and understanding communicative value. Grellet (1981), Kennedy (1981), and Harri-Augstein (1982), inter alia, regard these

skills/...

skills as crucial to efficient text processing.

Analyses of data show there are developmental patterns, but skills emerge 1 - 3 years late when compared with results obtained by Kennedy (1981) and develop at a retarded and erratic pace. The readers in all the standards have not mastered the skills sufficiently to process text efficiently. This research shows that Std 3 is a cut-off level where a transition takes place from lower-order to higher-order skills processing. In addition, Chi-Square Statistics show little transfer from Afrikaans to English; the skills develop independently in the two languages.

Enquiry has identified various factors that influence skills deficiencies, viz.: syllabus prescriptions and problems of interpretation; teachers' understanding of the reading process and the methods employed; teacher-training programmes; materials prescribed for reading; and reading in the society. This research recommends ways in which shortcomings can be remedied.

J.H. Pitt
Rhodes University
Grahamstown
December 1985

DECLARATION

I declare that this thesis is my own work.
It is being submitted for the degree of Doctor of Philosophy at Rhodes University, Grahamstown. It has not been submitted before for any degree or examination in any other University.

J.H. Pitt
.....
JOE HARRISON PITT
Twenty-Eighth day of December, 1985

P R E F A C E

"I did not discover I could not read
until after I had left the
university"

Mortimer J Adler (1939)

"... the very possibility, for which there is abundant evidence, that many intelligent and well-educated men and women can fail to achieve any reasonable measure of reading maturity must be profoundly disturbing in a society that sets so much store by universal education."

R. Morris (1963:89)

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My wife, Sophia, our sons Elwyn and Donovan, and our daughter Angela who waited patiently for the return of an "absent" husband and father;

Above all, to God, without whose grace nothing is possible.

Grahamstown
December 1985

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1.1 RATIONALE

The study is prompted by a deep concern for the high failure rate among "Coloured" pupils and students in high school and tertiary institutions. It is our firm belief that, at the heart of the learning problem, lies a lack of those skills basic to learning, viz. reading skills. Numerous studies have established a link between reading ability and performance in other subjects. Huelsman (1970), for example, obtained results with 300 children aged 9-10 years which indicate that backward readers as a group scored badly in various school subjects, ranging from content subjects to mathematics.

Reading problems for the Afrikaans-speaking "Coloured" students, are compounded by linguistic deficiency. Many pursue their studies in the second language, English. Even those who do so in their mother-tongue, Afrikaans, have to consult reference sources that are available only in English. Valuable time is wasted on arduous translations from one language into another, often with little or no understanding, resulting in various degrees of distortion of information. This leads to education failure which has its roots in a failure to develop the required reading skills in their mother-tongue at the appropriate level of development. Deficient or retarded skills in turn lead to erratic transfer of these skills to reading in the second language.

An investigation of skills acquisition and their transfer is the primary concern of this study, and the obvious place to start with an investigation of this nature is at the grassroots level, i.e. in the primary school. It is during this stage of development (middle childhood) that the cognitive abilities to cope with reading develop.

The study investigates/...

The study investigates the nature of the reading process and, more specifically, the acquisition of specific reading skills in English by primary school children whose home language is Afrikaans. The development of these skills is compared with those present in reading in the mother-tongue in order to establish whether skills acquired in reading in the mother-tongue are transferred to reading in the second language.

The framework within which the investigation is conducted is determined by:

(a) psycholinguistic theories of reading as formulated by, inter alia, Kenneth Goodman and Frank Smith (Ch.2);

(b) principles of communicative-functionalism as given by, inter alia, H.G. Widdowson, M.A.K. Halliday, and G.E. Lewis (Ch.2); and

(c) the skills inventory provided by, inter alia, Sheila Harri-Augstein, et al and Francois Grellet (Ch.2 and Ch.5).

1.2 NATURE OF THE PROBLEM

(1) Reading, in spite of a long history of intensive research, remains a largely misunderstood activity. The primary task of the research is the formulation of a definition of reading. Readings on the development of theories and the philosophies that underpin them have led to a better understanding of this complex process. Reading is currently regarded as a psycholinguistic process in which the reader samples graphic, syntactic and textual clues (Ch.2). While reconstructing the text, the reader makes hypotheses and regresses to confirm or reject them; reading is therefore an active process of encoding and not mere decoding of print. Because the process goes on largely unobserved, many aspects remain unexplained. This study aims to test existing knowledge and attempts to gain new insights into the reading process as evidenced by readers of a specific community.

(2) Reading,/.....

(2) Reading, in spite of massive auditory(radio) and visual (television) challenges, still remains the primary mode of communicating information. Yet efficiency in processing information eludes the reader after prolonged and intensive instruction. Experiences in teaching primary school children, and readings on learning problems point to a deficiency in reading skills. The research therefore has to focus on components of the reading process, i.e. constituent skills and their interaction.

(3) The list of constituent skills is extensive, and a decision on those regarded as most crucial to effective reading have to be isolated for directed testing. The research is guided by suggestions by Yetta Goodman and Caroline Burke (1972), and Francois Grellet(1981). The former suggest a miscue taxonomy for oral reading, and the latter test formats to test skills necessary for text processing, viz. word inference, identification, classification and organization of ideas, understanding relations within the sentence and the passage, recognizing language functions, and inferences beyond the text.

(4) Skills are interactive, i.e. they operate in combinations determined by reading purposes. The problem of test construction aimed at establishing the presence of specific skills/skills combinations in Std 1 through Std 5 is solved by basing tests on reading material prescribed for Std 3. Validity of developmental acquisition of skills can only be established if all testees take the same test. The Std.3 text is challenging to Stds 1 and 2, and the development of skills is observable. Std 3 represents the transition stage or cut-off level, and Std 4 and 5 should indicate refinement of skills.

(5) Quantifying reading skills poses yet another problem.

For the/...

For the oral reading test, strategies are determined by miscue analysis (Ch.5). Achievement in tests (silent reading) is assessed against readability levels suggested by Singer and Donlan (1980). Qualitative analysis of data as suggested by Heaton (1975) establish the validity of inferences.

1.3 AIM

The study aims to :

(a) analyse the reading process by identifying its constituent sub-skills;
(b) establish which skills are present / lacking at the different stages of development in reading in both the first and second language;
(c) determine developmental patterns of reading skills acquisition in L1 and L2;
(d) assess the extent of skills transfer (if any) from the mother-tongue to the second language;
(e) relate findings to causes through systematic examination of the teacher, his methods and attitudes towards reading, teacher-training programmes, primary school syllabuses, and textbooks; and
(f) make recommendations arising from findings.

1.4 RESEARCH PROGRAMME

CHAPTER TWO: Review of the literature: Issues and topics in the study of reading. The focus is on the various emphases (the letter, the word, the sentence, and discourse). Incidentally, these constitute a historical perspective of the development of the reading theory.

CHAPTER THREE: Review of the literature: Issues related to reading. Relationships, if any, are established between aspects which may contribute towards effective reading such as reasoning, intelligence, meaning, memory, visual and psychological operations, writing, and developmental progression in skills acquisition.

CHAPTER FOUR: Review of the literature: Reading in the second language. The presentation is in three parts:

(a) the relationship between second language reading and the psycholinguistic theory of reading;
(b) the relationship between reading in the mother-tongue and reading in the second language based on detailed discussion of significant bilingual studies; and
(c) a review of related studies in reading in a second language.

CHAPTER FIVE: Research Methods. Procedures for assessment of oral and silent reading are discussed in detail. Discussion includes test construction, the test population and administration.

CHAPTER SIX: Analyses of tests and skills. Data provide information on:

(a) the acquisition of reading skills in Afrikaans and English;
(b) developmental patterns of skills acquisition; and
(c) transfer of skills from L1 to L2 reading.

CHAPTER SEVEN: Conclusions and Recommendations. Findings are related to causes through an investigation of teachers' insight into reading, teacher-training programmes, primary school syllabi, teaching methods, and textbooks. Recommendations are based on findings, and suggestions are made for future research.

1.5 SOCIAL AND POLITICAL BACKGROUND

1.5.1 The Population

The study is conducted in a primary school in a specific South African community, viz. the "Coloured" community. The term "Coloured" is a political designation for a group of people who are "neither native (Black) nor White" (February 1981:5). The people thus referred to often find the term offensive, preferring the more general term "Black". Gerwel (1983:22) rejects the term "Coloured" as both unacceptable and objectionable. Of the term, Boesak (1977:28) says that, at its worst, it is character assassination and, at its best, negativism forced on him without his consent by white people in order to make a non-person of him.

Legislation forces these "non-persons" to live in declared group areas. The Coloured Persons Education Act of 1963 further isolates this community with the establishment of a separate education department which has been known alternately as the Coloured Affairs Department, the Department of Coloured Affairs Department, the Department of Coloured Affairs, the Administration of Internal Affairs (Coloured Affairs), and, currently, the Department of Education and Culture: House of Representatives. (The House of Representatives is the Coloured "house" in the new tricameral parliament. The other two are the House of Assembly for Whites, and the House of Deligates for Indians).

In spite of an unwillingness to accept the term with all its political implications, it is difficult to conduct any meaningful studies of this nature without taking into account the context of phenomena. The concept "Coloured", whether we like it or not, is both a social and political reality that cannot be wished away.

The education/...

The education failure that prompted this study is directly related to the socio-political factors tied to the concept "Coloured". These factors are discussed under 1.5.2 and 1.5.3

1.5.2 Factors impinging on learning

Although the concern of this study is academic, the influence of socio-politico-economic factors cannot be ignored since they form the immediate background against which learning takes place.

Concern about the effects of socio-politico-economic conditions on learning is expressed by various sources. Knott (1984:4) expresses his indignation in a scathing attack in an article titled "Stop Thief!" Commenting on "the near 100% passes" of white matriculants and the "barely 50%" of black pupils, he says,

> This contrast is symptomatic of the socio-politico-economic gulf separating the privileged few from the unprivileged majority.

The "gulf" is prescribed by the apartheid ("separatist") policy of the country and promoted by the separate education systems based on ethnicity. This separation is under fierce attack from, inter alia, Dr. James Moulder of the University of Cape Town, Mr Jan van Eck, Progressive Federal Party(white) spokesman on Education, and Dr Neville Alaxander, Director of the South African Council on Higher Education (Daily Despatch, December 31, 1983). They all agree: separate education can never be equal.

The "inferior" education system is propped up by ideology. Curricula and syllabi encourage rote-learning which produces intellectual parrots who can reproduce information, but who have not been taught to think, compare, analyze and evaluate. A visiting American educationist, Dr Jane Abercrombie, singles out learning by heart as "a peculiarly South African deficiency"

(Sunday Times, /.....

(Sunday Times, November 18, 1984).

Textbooks play a crucial role in the dissemination of the myth of white supremacy. Hanneke du Preez (ibid) studied textbooks in Afrikaans and English and discovered a range of master symbols "that govern the thinking of the writers of text books and the officials who prescribe them. Pupils learn, from legal authorities, classroom myths such as "whites are superior, blacks are inferior". Propaganda is promoted by the teacher who, she says, becomes.....

> a kind of demi-god who imparts information like an oracle of truth and who would not easily be questioned by pupils who lack the self-confidence of adults.

The curriculum that helps prop up the system is not always hidden, but often blatantly overt. Kitt Katzen (Weekend Post, September 1, 1984) reports on matric examiners' accusations of "heavy bias, distortion and inaccuracy in the marking of history papers in the Transvaal Education Department. Confidential memoranda included "guidelines, as statement of fact."

Katzen (ibid) quotes examiners:

> Only the facts or opinions that support the status quo are allowed. No other view is allowed....

and,

> Conservative or enlightened views can determine the difference between good and bad marks for all candidates.

Ideology is forced on the ruling class children to act out on the subjected. Pupils are rewarded for conforming to official thinking and "superiors", and internalize myths that will keep them in subjection and prevent them from militating against the accompanying social deprivation that typifies an unjust system. The influence of the environment on learning has been established empirically. Vernon (1965; 1969) studied the

deleterious effects of /.....

deleterious effects of environmental factors on intelligence and school achievement: both intelligence and verbal ability were lower among deprived children. Eisenberg(1966), Kelmer-Pringle, et al(1966), Douglas (1964) and Goodacre (1967) agree that reading achievement is highest in the upper socio-economic classes.

Vernon (1971:102) lists the following environmental factors which contribute towards good intelligence and educational achievement:

- -Reasonable satisfaction of biological needs;
- -Stimulating environment and encouragement of exploration and experiment;
- -Linguistic stimulation, encouragement of linguistic and conceptual development;
- -Demanding but democratic family atmosphere, showing tolerance and lack of rigidity, and emphasizing self-control, responsibility and interest in school-work;
- -Cultural stimulation in the home; parents' co-operation with the school and aspirations for the child;
- -Regular and prolonged schooling, also emphasizing individual initiative and responsibility and discovery methods rather than rote-learning; and
- -Wide and adventurous leisure activities.

The absence of all or some of the above conditions is evident to a greater or lesser degree in all deprived communities. Wendy Fraenkel (Weekend Post, March 2, 1985) describes the conditions in "Coloured" schools in Port Elizabeth as "(the) chronic hunger situation". She quotes one of the teachers at a primary school:

> At least half of my class are finding it difficult to concentrate. I don't even have to ask why- the reason is written all over their faces and in their eyes.

The Bureau of Economic Research at the University of Stellenbosch has recently discovered that, in addition to observable effects of malnutrition such as gastro-enteritis, measles, influenza, tuberculosis, even cardiac diseases, permanent brain damage may result (Rapport, September 15, 1985). It is quite frightening to consider the waste of human resources wrought by a vicious system.

1.5.3 Response to factors

Since the influence of socio-political factors is felt more acutely in education, it is little wonder that resistence is most vehement from this quarter. The 1976 riots were sparked by a resistance to Afrikaans being enforced as the medium of instruction in black schools. Afrikaans is seen as the medium of the policy of apartheid. Harmful racial slurs in text books also caused resentment which resulted in public burnings of all books containing biases.

The system of apartheid no longer remains unchallenged. Teachers' unions, parents and pupils are demanding equal education under a single education department in a democratic society. The call for a single education body has been made by various organizations, even those recognized by the state. The Human Science Research Council, in a report, The Report of the Main Committee of the HSRC Investigation into Education: Provision of Education in the RSA (1981), better known as the "De Lange Report"(and regarded by progressive thinkers as conservative), called for a single education system. The response to the recommendations are best summed up by Andre du Toit (Eastern Province Herald, November 27, 1984). He says,

> Politically, the most radical was the proposal that the various racially differentiated education systems be brought together under a single ministry at national level..... When the White Paper appeared eventually in 1983 it was made clear that education was to be put firmly in the context of the new constitution as "own affairs" of racially

defined communities./.....

defined communities. The old political order of separate education would be maintained.

Refusal by the relevant powers to act positively on findings and demands has met with open confrontation. Politicians are accused of interfering in education. They directly appoint staff to key positions in education according to political affiliations, and threaten teachers who dare to criticize the system with dismissal, transfer to wasteland areas in remote corners of the land, cancellation of benefits such as housing subsidies, and various other punitive measures. (Such threats and actions have brought them into direct conflict with teachers who demand, through progressive teachers' unions, removal of party politics from education).

The most vehement opponents to the present education system are those directly at the receiving end: the pupils and students. Demonstrations are met with violent repression which in turn result in frequent and protracted disruptions of the education programme. Class boycotts have, since 1976, become a permanent fixture in the school calendar, and a "quiet" year seems merely to suggest recuperation from spent energies and a regeneration for resistance in the next.

1.5.4 Evaluation

The socio-political conditions sketched above provide the background against which "Coloured" education takes place. Persistence of these conditions is a serious indictment of an education system - not just the formal system, but the people who staff it - which fails to trigger growth of new functional systems because it follows what Freire (1970 b) calls the "banking concept" which anesthetizes and inhibits creative powers and which, according to Elsasser and John-Steiner (1977:363) prescribes the internalization of existing knowledge and, frequently, the objectives of the dominant groups in society. It is the moral duty of the teacher to liberate the

shackled minds /.....

shackled minds of the student, and in so doing, have a liberating effect on the community as a whole. Teachers' measure of the success of their effort will be the effect of the learning on the social structures. In the words of Elsasser and John-Steiner(1977:362), "educational intervention without actual change is, in fact, ineffective." Unfavourable social conditions, if they prevail, will entrench education failure.

1.5.5 Evidence of education failure

Evidence of the education failure is found in the report of the Commission of Inquiry into Matters Related to the Coloured Population Group (1976), also known as the "Theron Commission Report". Of the 85 089 pupils enrolled in Sub A in 1964, only 5777(6,8%) were in Std 9 in 1974. The situation has not improved much since. Compare the Sub A and B enrolment of 195 679 in 1972 with the Std 9 and 10 population of 27 453 (14,24%) of 1981 and 1982, not taking into account failures from the period preceding 1972 (Statistical Records 1983).

There is evidence of education failure even in tertiary institutions where it is assumed that students have mastered the processing of textual material.

Student performances in a three-year teacher-training course at the Dower College of Education, Port Elizabeth, during the 1981-1983 period reveal the following statistics: Of the 151 students enrolled for first-year study in 1981, only 59(39%) passed at the end of that year. A further 42 were promoted, thus artificially boosting the number proceeding to the second year of study to 101 (67%). Only 53(35%) of the original number reached their final year of study in 1983. This number was further decimated by the failure of 17 students at the end of the year, bringing the number of students who successfully completed the course within the prescribed three years to 36 (23,8%).

What makes the statistics even more horrifying, is the fact that the students are an elite group. They are members of a

group of 5 260 out of a total of 8 343 (63%) matriculants who passed in 1980. In addition, they satisfied requirements for admission to a tertiary institution, viz. languages on the higher grade, and a minimum E- symbol aggregate overall.

The students' surviving the vicious weeding-out process of the socio-politico-economic factors, and their satisfying academic requirements suggest they are motivationally and intellectually suited to pursue their studies at institutions of higher learning. The logical question then, is, "What went wrong?" The answer lies in the already-stated assumption: learning problems have their roots in lack of reading skills. Instead of processing textual information through analysis, evaluation and discrimination, the emphasis is on mechanical skills of retention. Educational success is measured in terms of how much is remembered for how long. The hypothesis is tested in a test for reading skills of first-year Afrikaans-speaking Diploma in Education students at the Dower College (See 1.6).

1.6 READING SKILLS TEST ADMINISTERED TO DE I STUDENTS

1.6.1 The Test

The passage is a scientific article in Science and Technology in Every-day Life: A SCI/TECH READER (1977) (APPENDIX IA). Questions are designed to test inference of word meanings, identification of reference, retrieval of information (scanning), inference of information not specifically stated, and recognition of topic (CH. 5). These sub-skills are isolated as crucial to reading for learning by, inter alia (Kennedy 1981; Grellet 1981; Harri-Augstein, et al 1982).

The test consists of 10 multiple-choice items, each with 4 options from which the testee has to indicate the choice which, in his opinion, is the most accurate or natural.

The average score for the whole test is 63% (TABLE 1.1). According to Singer and Donlan (1980:190), the readers are at the frustration level, i.e. below 70%. Learning is therefore inhibited because of reading skills deficiency.

TABLE 1.1
GROUP SCORES OUT OF 100

Item No	Score
1	85
2	71
3	69
4	69
5	72
6	50
7	74
8	57
9	41
10	31
Average	63

Reliability is calculated according to the formula suggested by Heaton (1975): $r_{11} = \frac{N}{N-1} - \left(\frac{1-m(N-m)}{Nx^2}\right)$

The test has a reliability index of 0,939 (APPENDIX IB), which indicates that the test is a reliable instrument. The average item difficulty or facility value (F.V.) of 0,61 suggests it is at an appropriate level of difficulty and discriminates fairly well (D=0,54) between good and poor readers (TABLE 1.2). An extended item analysis will provide qualitative evidence of skills deficiency.

TABLE 1.2
ITEM DIFFICULTY (F.V.) AND DISCRIMINATION (D)

ITEM	1	2	3	4	5	6	7	8	9	10	AV.
F.V	0,83	0,67	0,65	0,59	0,67	0,50	0,70	0,61	0,59	0,33	0,61
D	0,33	0,44	0,70	0,74	0,37	0,70	0,41	0,63	0,60	0,52	0,54

1.62 Item Analysis (APPENDIX IC)

Item 1: 85% of the students made the correct choice. This suggests high proficiency in inference of word meanings. The facility value of 0,83 would seem to confirm this, but the discrimination index of 0,33 indicates poor discrimination between good and poor readers.

The item is therefore too easy. All the options mean "mastering" in isolation; the reader has to make use of context to arrive at the correct meaning, viz. "to bring under control".

10% of the readers chose D, "to become an owner", while 2% and 3% respectively chose A and B. A ("to become captain of") is chosen for its association with the sea. B, "to hold a university degree" is a completely unrelated distractor.

Item 2/...

Item 2: This item also tests inference of word meaning. The difference is in the options: they do not have the same dictionary meaning. The item is at an acceptable level of difficulty (F.V.=0,67) and discriminates fairly well (D=0,44). 71% of the testees made the correct choice: the word "benefits" means "rewards"(B). The majority of the students are able to utilize context to guess at meanings.

14% of the students arrived at their choice through association; the benefits are accrued by tapping the resources (C).

The rest of the students (15%) guessed at the meaning without making use of context; 8% choice A("efficiency") and 7% chose D ("exploration") which are total distractors.

Item 3: The students' ability to identify definitions of concepts is tested. The concepts "self-supporting" and "systems" are defined by the option, "equipment to keep the crew alive" (C).

69% of the testees made the correct choice; 31% have problems with concepts. 17% selected B("contain crews that will clean and cook"). They processed only one concept, viz."self-supporting"; "crews" does not define "systems". 12% chose D(" systems that will help to build houses on the ocean floor") because "systems" appears in the stem, and "houses" is cued by "housekeeping". A is a total distractor chosen by 2% of the testees.

The majority (69%) demonstrate an understanding of concepts; 17 % have partial understanding, or cope only with single concepts; 12% refer to lexical cues to the exclusion of textual clues; and 2% cannot cope with concepts.

The conclusions/...

The conclusions are reliable since the F.V. of 0,65 suggests acceptable difficulty, and the item discriminates well (D=0,70).

Item 4: The meaning of "unmanned" in "unmanned vessels" is inferred from a context outside the text. The reader must refer to a nautical context in which vessels are "manned by a crew"; the pre-fix "un-" would then suggest "removal of" or "without". "Unmanned" therefore means "without a crew"(B). The nautical register is not unfamiliar to the readers since the word "bemanning" ("crew") is common in Afrikaans.

69% of the testees deduced the correct meaning. 16% chose A ("with aquanauts only") because they do not know the meaning of "aquanauts", although they should have inferred from the text they are people. 14% chose D("with trained dolphins only"), even though "un-" means "without", and dolphins, trained or untrained, do not form part of navigational registers. 1% opted for C("with a female crew"), again disregarding the prefix "un-", or otherwise regarding it as an indication of antonomy: "female" is the opposite/femine gender of "man".

Most of the testees utilize context inside and outside the text, and deduce meaning through analysis of meaningful units; 30% utilize partial context; and 1% take wild guesses.

The item is at an acceptable level of difficulty (F.V.=0,59) and discriminates well (0,74). The outcome is therefore a reliable reflection of skills competence.

Item 5: Testees are required to retrieve specific information that is stated/given in the text. This skill requires quick reading down the page, and selecting specific information from a range.

72% of the testees could locate the most important benefits from exploring the ocean floor, viz. "sources of food and fresh water" (D). Options B and C are also resources, but the

text overtly marks /....

text overtly marks D as the most important. 3% and 7% chose B and C respectively, an indication that a sizeable number (10%) disregard lexical markers. Alternative A is a total distractor, but appealed to 18% of the testees which suggests that these students are unable to locate specific information given in the text.

The item difficulty (F.V) of 0,67 suggests the item is acceptable and discriminates fairly well (D=0,37). The result is a fair reflection of testees' ability to retrieve specific information from the text.

Item.6: This item tests readers' abilities to summarize sections of the text. Alternative A("submarines, dolphins and aquanauts") is a summary of paragraph 2, which has as its topic the ways in which the ocean floor is explored. The skill of summary therefore requires an understanding and recognition of topic. In paragraph 2 the topic is introduced in the conventional way - in the first sentence of the paragraph.

50% of the testees display competence in this skill. Half the readers are unable to recognize summary and topic. 26% selected D("the realm of science fiction"), evidence that testees either do not recognize hypotheses or conditionals, or cannot separate them from reality. 12% of the testees selected B("water pressure and support systems"), and 12% selected C("medical science"). Both are unlikely choices and suggest that 24% of the testees are not able to recognize topic.

The item has acceptable difficulty(F.V=0,50) and discriminates very well between good and poor readers (D=0,70).

Item 7: The word "know-how" is a compound of the concept "knowledge" and its application. Options A,B and C all embody knowledge of some kind, but only D("techniques") has the added meaning of application. 74% of the testees inferred the correct meaning through analysis of meanings of word parts, while the rest selected A(14%), B(7%), and C(5%).

Testees/..

Testees seem to cope fairly well with word inference if context does not play a significant role. The facility value of 0,70 suggests reasonable difficulty. The item discriminates fairly well (D=0,41) and results are therefore a good indication of readers' abilities in this particular task.

Item 8: The personal reference "they" is a substitute for a noun that went before. Testees are therefore required to identify relations between parts of the text through anaphoric reference. Failure to recognize the referent, or mistaken identity will either lead to serious distortion of information, or complete break-down in communication.

The reference ("they") appears in a subordinate clause and refers to a noun, "aquanauts", in the main clause. 57% of the testees are competent in the skill of retrieving referents; they are sensitive to relations in the text. 19% selected option A ("scientists in the medical field"), 14% selected B("unmanned vessels"), and 10% chose D("oxygen and nitrogen").

The testees who selected A failed to understand that the scientists prepared the aquanauts for swimming at great depths; they failed to establish a relationship between elements prior to and preceding the reference marker. Those who chose B fail to realize that vessels do not swim, but float. D ("oxygen and nitrogen") is a total distractor and its selection points to random guessing purely on the basis that it appears in the same context.

The item is at an acceptable level of difficulty (F.V.=0,61) and discriminates well (D=0,63) and closely reflects performance on reference.

Item 9: Testees are familiar with the concept "sample", particularly in the scientific context. Even without referring to the passage, an effective reader can infer that "rocks, sand, plants and animals" (D) are samples by appealing to experience and knowledge outside the text. Objects thrown into the

sea may be/.....

sea may be regarded as samples (pollution?), but the context cues samples of a physical science nature since the vessels explore the ocean bed. Photographs (B) and maps(C) are representations and locations of samples.

41% of the testees made the correct choice. 59% of the testees are unable to infer meanings from information outside the text; they are unable to apply existing knowledge to reading, i.e. they are completely text-dependent.

The inference is valid since the item is at an acceptable level of difficulty (F.V.= 0,59) and discriminates well (D=0,60) between good and poor readers.

Item 10 : "A world under the waves: how to get there and why" (C) is an accurate summary of ideas expressed in the passage. The sum total of the topic sentences of the paragraphs provides a synthesis of the whole passage. The other alternatives are representative of single paragraphs or topics: A represents paragraph 2 only, and the means of exploration; B represents paragraph 1 only; and D represents the resources in paragraph 3.

31% of the testees demonstrate an ability to synthesize, or recognize synthesis - thematization as formulated in Lewis's (1983:43-69) Theme/Rheme in which readers establish a relationship between "salience" and "importance".

37% of the testees chose D("Secrets of the ocean depths") on the grounds of salience without taking importance into account. 12% chose A and 20% chose B because these readers utilize parts of the text (topic) at the expense of the whole.

1.6.3 Summary and Evaluation

Individual scores(APPENDIX I.C) indicate that 19% of all the testees scored 90% and higher; these readers are at the fluency level (Singer and Donlan 1981:190). 28% are

at the instruction/..

at the instruction level(70-89%) and more than half (53%) are at the frustation level, displaying a serious deficiency in reading skills. This is a matter of great concern since these prospective teachers who have not mastered the reading act themselves are to teach children to process information.

The exact extent of skills deficiency in first-year students is expressed in average group scores. There is a hierarchy of skills deficiency.

- 15% deficiency in utilization of context to select appropriate words with the same lexical meaning- there is evidence of defective use of the dictionary;

- 21% deficiency in understanding concepts by utilization of context and analysis of word parts;

- 21% deficiency in ability to deduce meaning through analysis of meaningful parts of derivations, viz. prefixes;

- 26% deficiency in ability to deduce meaning through analysis of elements of lexical compounds;

- 28% deficiency in ability to scan, i.e. to retrieve specific information overtly stated in the text;

- 31% deficiency in ability to infer word meanings from context - readers are more dependent on word associations than textual clues;

- 43% deficiency in ability to identify relations between parts of a sentence and the passage through anaphoric reference;

- 50% deficiency in ability to infer information not specifically stated in the text; and

- 69% deficiency in ability to identify theme through

recognition of the relationship between salience and importance of topics in the whole passage.

There is a pattern of skills deficiency: readers have greater problems with the processing of larger pieces of discourse, e.g.inference of word meanings in context has 15% deficiency; ability to infer relations between parts of a sentence through anaphoric reference has 43% deficiency; ability to recognize topic at the level of the paragraph has 50% deficiency; ability to infer information outside the text has 59% deficiency; and ability to infer theme has 69% deficiency.

The results are clear proof that students who enter teacher-training institutions do not have the skills required for effective reading, and this accounts for the massive failure rate. The institutions assume that the students who enrol are mature readers. Ironically, one of the main arguments in favour of lectures is that students "are immature and are therefore deemed to learn more easily from listening than reading" (Laing 1968:19). The ambivalence towards reading and its problems again underlines its complexity. Some institutions have diagnosed the absence of reading skills and attempt to apply instant therapy in the form of support or compensation programmes. Commendable though these programmes may be, they are often of short-term value; it is often a matter of too little coming too late.

While we accept that reading skills in silent reading continue to develop throughout the life-span of the (literate) reader, the skills, especially the higher-order skills, have such serious deficiencies that effective learning cannot take place. The hypothesis is that skills do not develop quantitatively and qualitatively at the appropriate stage, hence the investigation into developmental skills acquisition in the primary school.

CHAPTER TWO

REVIEW OF THE LITERATURE

ISSUES AND TOPICS IN THE STUDY OF READING

2.1 Introduction

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.

Reading is now recognized as the skill learners find the most difficult to master. The question,"Why can't Johnny read?" is heard more often today as parents, employers, academics, politicians and students themselves find that problems at work and at tertiary institutions are related to the ability, or rather the inability, to read. Recognition of this lack of reading skills in itself is commendable since many 'readers' are not even aware of their shortcomings. Mortimer J.Adler (1939) once said,

> I did not discover that I could not read
> until after I had left university.

Adler was indeed fortunate since many students do not even get through university(if they do get there !) and are none the wiser as to the reason for their failure, in spite of proven intellectual ability.

Many readers do not progress beyond the mastery of mechanical skills[1] ! The problems may spring from longheld assumptions that reading is a receptive skill, thus implying that it is a passive skill, and denying the active dynamic engagement in the text as displayed by successful (efficient) readers. Consider the following remark by West (1941:6):

it (reading) involves /.....

> ....it(reading) involves no active use of gram= mar or idiom, and the memory of the vocabulary is mere Recognition.

This belief still persists in some quarters in spite of psycholinguistic evidence to the contrary.

Different views of reading have resulted in several models of reading which emphasize various aspects of language, viz. letters, words, sentences, and discourse. They all attempt to find an answer to the question, "Why can't Johnny read?" through a search for a definition of reading.

2.2 Emphasis on letters

Language is analysed as consisting of sentences which consist of words which are, in turn, made up of letters. This emphasis regards individual sounds as the basic unit of language and their corresponding letter representations as building-blocks in word formation and, ultimately, the sentence (in text). This emphasis is called the sound/symbol or decoding orientation which regards reading as a "mechanical decoding, of turning the printed symbol into sounds which are language." (Weaver 1980 : 24-26). It has a long history.

The Reverend Andrew Bell (1797) published a book which prescribed a spelling method whereby pupils start off by tracing the letters of the alphabet in sand. He writes:

> When familiar with his alphabet and able without the smallest hesitation to tell every letter in any book and write it on sand, then, and not before, he proceeds to the next stage.

The learner is required to say aloud the names of letters in a word and to follow this by saying the word as a whole, e.g. C-A-T (spells) 'cat'. The spelling or alphabetical

method can thus be / .....

method can thus be regarded as the forerunner of the phonics approach.

There are variations of the same concept. Nellie Dale (1899) outlines her approach: children are taught sound production and asked to identify the "noise" produced by various articulatory combinations. Letters are then presented in word contexts and all letters representing sounds made the same way are presented in a particular colour, e.g. all bilabials (p,b,m) in blue.

Colour representation as sound-values of letters still enjoys popularity in some quarters. Moxon (1962) uses red for short vowels, blue for long vowels, green for silent vowels, etc.

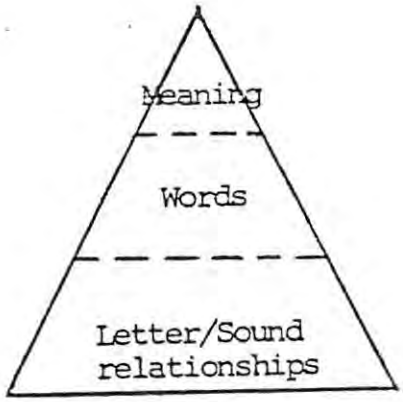


FIG.2.1: THE PHONICS APPROACH

In spite of its popularity, the approach has not gone uncriticized. Edgeworth and Edgeworth(1798) argued that "naming of the letter obscured the part which that letter played in the sounding of the word." For lack of greater insight, they accepted that reading was basically a matter of translating the visual symbols of print into the auditory pattern of the spoken word, letter by letter" (Morris 1963:40). But this did not stop them from recognizing the problems inherent in phonics. They express their dilemma thus:

O in the / ...

> O in the exclamation Oh! is happily called by its alphabetical name, but in to we can hardly know it again, and in morning and wonder it has a third and a fourth additional sound....

Almost two centuries later the criticism is still valid. Smith (1978 :51) reiterates that there is no one-to-one correspondence between letters and sounds. Such correspondence would require that every sound be represented by only one letter. He claims (op cit, 52) that there may be several ways in which individual letters are pronounced, and that there is no reliable guide as to which of the alternatives applies on a particular occasion. As illustration, he gives several examples, e.g. the spelling unit oo in brook, broom and blood - the same spelling unit but different sounds. Other examples include words like read /rid/ and read /rɛd/ and wind(/waInd/) and wind (/wInd/- different pronounciations for the same spelling. Others like so, sow and sew have the same pronounciation for different spellings (op cit, 53). He concludes that "some simplification may be achieved by recognizing that we cheat with our alphabet and use it as if there were in fact more than 26 letters" (ibid). The teaching of phonics is therefore a complicated way of making learning to read complicated. It is a practice that works in reverse since coping with phonics implies that one is already able to read.

In an effort to overcome the spelling-sound irregularities, the Edgeworths devised a system which, together with the twenty-six letters of the alphabet, contained seventy-three symbols. For the sake of economy, they decided to retain the original spelling, but assisted pronunciation with the use of diacritical marks. The idea, invented by Bullokar (Morris 1963:42), has since been revived and improved. Shearer (1894) copyrighted a system, Shearer's System, which attempts to regularize English spelling.

The exercise continues /...

The exercise continues. In the 1960s Sir James Pitman's (1961) Initial Teaching Alphabet (I.T.A) proved popular. English words were presented with special marks on letters which "allowed for more consistent sound-to-symbol correspondence" (Molteno Project Report 1983/84:3). The Report cites evidence of work done in black schools. In 1963 "teachers in experimental schools in Soweto were taught a phonemic ("broad phonetic") spelling (PS) in conjuction with an understanding of the English pronuncia= tion system and some of the more basic rules of sound -to-symbol correspondence," a project which proved highly successful, according to an evaluation made in November 1964.

Whereas the adherents of phonics have tirelessly endeavoured to solve the spelling-irregularity problem. some theorists have chosen an alternative. The main criticism of the emphasis on letters is the meaninglessness of letter discrimination. The argument is that the sound of the letter is determined by its context in a word, hence the shift in emphasis from the letter to the word.

2.3 Emphasis on words

Ostensibly, this approach is concerned with meaning. It recommends helping children develop a stock of up to one hundred words they can remember on sight. This concept of reading heralded the birth of the "sight word" or "look-say" approach. The teaching of individual letters and their corresponding sounds gave way to the presentation of basic words such as I, and and the using flash cards. Helen P.Davidson (1931), in an experiment with four-year-olds, found they could, after four months instruction, recognize between 20 and 269 words. She (Davidson 1931) attributes this ability to children's ability to discriminate between shapes: words have shapes.

The whole-word approach /.....

The whole-word approach enjoyed particular popularity from about 1930 until the mid-sixties. In its final form, it differed little from the phonic approach. It started as a reaction to the teaching of "meaningless" letter-to-sound symbols, but ended up achieving very little meaningful learning itself. Weaver (1980:25) says:

> Although advocates of the sight word approach have expressed concern with meaning, actual classroom instruction has tended to focus heavily on the recognition of words. Thus the sight word approach also seems to assume that once words are identified, meaning will take care of itself.

The above emphases of reading have, in addition to the much-maligned phonics, two other main tenets: decoding and oral reading. These have also not escaped criticism.

In decoding, meaning of the written word is not attacked directly. The emphasis is on phonics generalizations before the exposure to whole sentences. Meaning is regarded as "something out there", something mysterious which will follow (hopefully!) once the "mechanical skill of decoding, of turning the printed symbols into sounds which are language," is mastered. There is an optimistic gamble that comprehension will follow once the reader has cracked the code. Until then, reading remains a meaningless sounding of graphic symbols, unflatteringly called "barking at the page"(Goodman 1969:377). Goodman says these methods are built on traditionally-held misconceptions that "graphic input is precisely and sequentially recorded as phonological input, and then decoded "bit by bit". Once this decoding skill has been mastered, the teacher seems to be left with one more course of action: increasing reading speed which involves reduced movement of the nose and eyes. The nose is fixed somewhere in the middle of the line and the eyespan on either side of the nose is expanded, an approach known as the "end-of-the-nose" view of reading.

Comprehension/...

Comprehension is measured quantitatively, and not qualitatively. It is assumed that once the reader has recognized as many words as possible and assigned meaning to each one, he will understand. Whether this end-product is in fact realized is not the chief concern of this study.

Oral reading also comes under heavy fire. The approaches discussed above assume that reading means reading aloud; i.e. sounding out words. It is a direct outflow of the audio-lingual method,[2] based on the views of behavioural psychologists and structural linguists. They held the respective views that language learning is a process of habit formation and that language itself is speech. The methodology that resulted from these views persisted even when new insights into language acquisition were gained, mainly because of the considerable intellectual investment in these beliefs; the approach was retained for sentimental reasons. The influence is far-reaching: when readers who learn to read in this manner progress to silent reading, they continue to "sound" words. Saville Troike(1979:26) supports this and observes that,

> In reading, and this happens in reading our native language,too, we subvocalize; that is, we make sounds in our throats. We read faster, therefore, if we know how to make sounds without stumbling over them and if we have learned to read in thought groups.

Cazden (1972) reports that some educators claim that reading aloud may be detrimental to a beginning reader. All reading experts, he claims, agree that "subvocalization during silent reading is bad habit calling for remediation."

West (1941:76) claims that reading aloud actually limits reading speed . The speed of reading aloud, he asserts, varies between eighty and about a hundred and sixty words a minute. He condemns the practice outright:

Except in teaching/

> Except in teaching pronunciation, ordinary Reading Aloud is not merely a useless exercise for foreign language learners: it is likely to be actually harmful, because it tends to produce just that evil which the teacher is most anxious to prevent - parrot talking without any meaning. Reading Aloud tends to establish a direct path between the eyes and the voice without disturbing the brain at all.

Coady(1976) sums up the critique of oral reading as follows:

> Reading Aloud requires that every word be apprehended not only by its visual configuration but also by its oral counterpart. This leads to mediated word identification[3] which necessarily slows down the pace of reading.

The pace of reading is slowed down because the oral reader is forced to"attack" each word. Smith(1971:90-94), Bever and Bower (1970:306) and Ferguson(1973:30-34) argue that fast reading contributes to the apprehension of meaning and that, in slow reading, "the overall picture may be lost owing to attention to detail, while unfamiliar vocabulary may frighten the student into not reading."

Baron and Barron(1977) cite research done by Condry et al (1979). They presented grades two, five and university students with a target word and two choices. They were supposed to match one of the words with the target word, e.g. plate. The choices included the correct word, e.g. dish, and a distractor, e.g. wait, that rhymed with plate. The subjects were required to indicate which one of the choice words was similar to the target word in a specific way: graphically, phonologically, and semantically.

The researches predicted that the influence of rhyming distractors would decrease across age. The reverse was true: rhyming distractors tended to increase across age. Similar findings were reported by Radir (1975) and Condry (1979) although they used different tasks. An explanation of this phenomenon is that children, on entering school, have not been exposed to reading aloud to the same extent as students in higher grades. They therefore have less experience in reading aloud. Knowledge of the phonological system proves a hindrance to word meaning access, and tends to interfere with semantic tasks.

As early as 1945, Busswell reported that, as Director of the Adult Reading Clinic of the University of Chicago, he had examined some 2 000 adult readers;

> ...and can say without qualification that the greatest single obstacle to efficient reading for these adults is the tendency to subvocalize and to proceed, "word-by-word", as they read. The result is slow reading, mind-wandering and attention to detailed words rather than complete meanings.

To summarize, reading aloud is generally seen as promoting bad habits like subvocalizing which, together with the enforced "reading" of every word, inhibit meaning access. It is ironical that the same arguments of whole-word adherents against the emphasis of letters should be used against it by the exponents of sentence models.

2.4 Emphasis on the sentence (Syntax and semantics)

The sentence-method does not follow chronologically on the phonics approach. Historically, its development precedes that of the whole-word approach. Farnham promoted it in America with a publication in 1887. It had as its underlying philosophy the definition of reading as "thinking under the stimulus of the printed page."

This view/

This view has great significance since it marks the beginning of understanding reading as an active process. The methods, e.g. presenting language as lists of syllables, e.g. "I go so. So I go, No, I go so," however, did not live up to its promise: combinations of syllables do not help getting at meaning first. Instead, the reverse is true: the reader concentrates on word recognition.

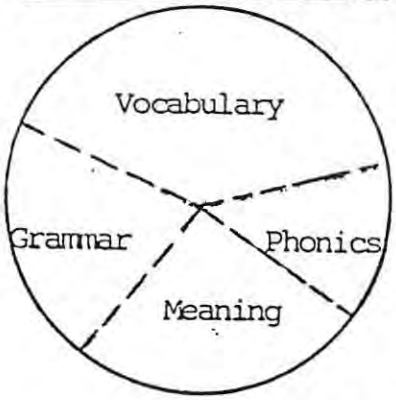
A yawning gap existed between theory and practice which Jaggers (1929) attempted to bridge. He suggested three stages. In the first, the children are shown pictures and comments are invited from them. Choice comments are written out in complete sentences, "with natural phrasing and without any attempt to emphasize the separateness of individual words" (Morris 1963:58). Jaggers rationalized that people think in sentences. The second stage concerns individual words which make up the sentences composed in stage one. The words are presented in context, and recognition follows, rather than precedes, meaning. In the third stage, readers are expected to recognize sentences and are encouraged to guess at meanings of words. This approach is also known as the language experience approach which had several peaks of popularity, viz. from about 1909 to 1918; in the late 1920s and early 1930s; and again from about the mid - 1960s into the early 1970s (Weaver 1980:26).
Weaver sums up the approach as follows:

> (It) seems to assume that learning to read means learning to glean meaning from the text, and that in order to get the meaning, we must bring meaning to what we read (ibid).

Fig.2.2 /

FIG. 2.2

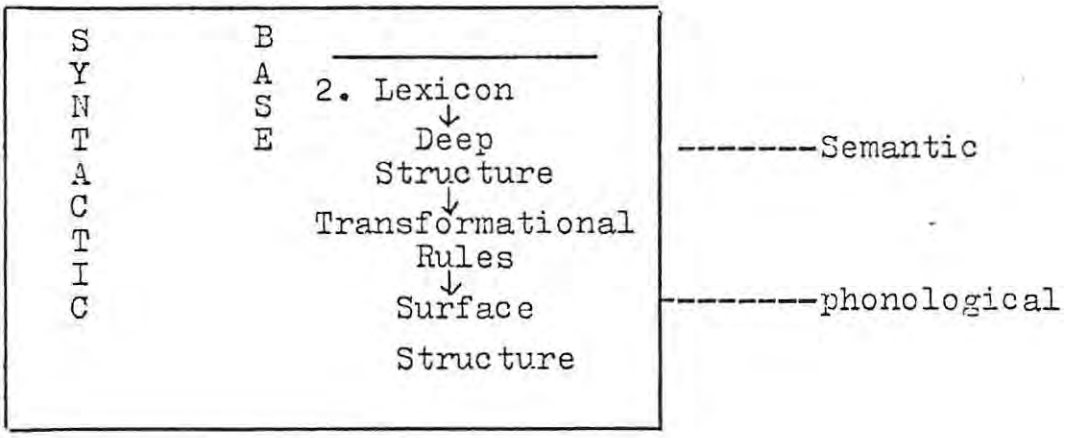
WORD - CENTREDNESS



Jagger's sentence-theory may be regarded as the forerunner of the cognitive view of reading. The psycholinguistic view of language attempts to understand what really goes on in the mind of the language user("psyche-mind; "linguistic" - of language). Cognitive psychologists, notably Noam Chomsky, like Jaggers, regard the sentence as the basic unit of language. Transformational linguists (Chomsky) explain linguistic operations in terms of deep and surface structures.

FIG. 2.3

TRANSFORMATIONAL GRAMMAR COMPONENTS
(ADAPTED FROM GROVE 1979)



Smith(1978:70-71) /.....

Smith (1978:70-71) describes surface structure as the physical characteristics of language, the sound in speech and the print in the text. He elaborates:

> To make statements about the physical characteristics of language, it is not necessary to specify or even know the particular language concerned. Statements about meaning, on the other hand, can be made quite independently of any statements about physical characteristics.

The surface structure is represented by the visual and auditory information. In reading, it is "the visual information that our eyes pick up in their fixations." It contains no meaning in itself. It contains clues; meaning is signalled by word endings, function words and word order. The clues merely assist the reader to predict at the syntactic level; they promote fluency in oral reading rather than fluency in comprehension.

Deep structure is the level which, according to Smith (op cit, 71-2) is "an alternative term for meaning". It lies at a level deeper than the artificial wrappings and contains a great deal more than the surface structure; deep and surface structures are not mirror images of each other. Smith (ibid) argues that "there is no 'one-to-one' correspondence between the surface structure of language and deep structure." This is illustrated by such ambiguous structures as "Visiting teachers may be boring" (op cit, 72) which have two deep structures. One has the teachers (as subject noun phrase) doing the visiting; the other has some else (indefinite subject noun phrase) visiting the teachers.

The above illustration is often cited in criticisms of the deep-structure-and-surface-structure (cognitive) view, viz. it is applicable only to ambiguous sentences, but it serves to illustrate that there is another, deeper level of language- meaning - which lies below the

artificial, surface structure. It is an awareness of this source which would not otherwise have been obvious, had it not been for these ambiguities. Ambiguity exists at the letter, word and sentence levels. If the reader has to depend on 'interpretation' of surface structures, he would not resolve the doubts about relationships within the sentence. Smith (op cit, 75) continues the argument about the meaninglessness of the surface structure:

> ....neither individual words, their order, nor even grammar itself, can be appealed to as the source of meaning in language and thus of comprehension in reading.

This new understanding of language has led to the development of a new model. Its rationale is based on what the efficient reader does, and on harsh criticism of phonics. Donald Knapp (1980:347) considers phonics as "an optional, intermediary step, not critical to the essence of reading.." He is prepared to go even further and claims that,

> The ability to sound out words and phrases without linking them to meaning cannot be usefully equated with reading, and it is quite possible to learn the message of written material without sounding it out.

Knapp stresses the priority of meaning, but fails to give a satisfactory definition of reading. Wardhaugh (1969) does:

> When a person reads a text, he is attempting to discover the meaning of what he is reading by using the visual clues of spelling, his knowledge of probabilities of occurrence, his contextual - pragmatic knowledge, and his syntactic and semantic competence to give a meaningful interpretation of the text. Reading is not a passive process, in which the reader takes something out of the text without any effort or merely recognizes what is on the page and then interprets it, a process in which a stage of decoding precedes

a stage/..

> a stage of involvement with meaning. There is little reason to suppose that there are two such discrete, non-overlapping stages. Reading is instead an active process, in which the reader must make an active contribution by drawing upon and using concurrently various abilities that he has acquired.

Rudine Sims (1975:103) lists the following features of the new model as inferred from what efficient readers do when they read.

> -Reading is an active process in which the reader brings his own meaning and immediate language experience;
> -It is a process of having expectations and making predictions based on these expectations;
> -The reader slows down and pays close attention to contextualized clues available and makes conscious confirmations of predictions before continuing;
> -Readers are forced to regress in order to correct themselves, or to read ahead before deciding on its meaning.

The reading process involves making predictions and confirming them, based on whether what one is reading makes sense, and comprehending or integrating meaning - getting some message from the material (op cit, 103).

Reading, therefore, demands the involvement of language and thought. The reader brings to the text his own ideas, concepts, past experiences and knowledge of language and how it works. This means assigning meaning to the graphic display (the surface structure), and to do this the reader must superimpose an underlying or deep structure to it in order to process the relationships in the text.[5] This is done by interpreting signals in the surface structure.

Smith (1973:23) says the ability of /.....

Smith(1973:23) says the ability of efficient readers to identify letters or words follows rather than precedes their assignment of deep structure or meaning. "Once they (the readers) know what they have read, they also know the words they have read and their spellings"(ibid). They sample the available language cues in the passage and predict its surface structure. Holmes (1973:66) says:

> ...if word identification preceded meaning identification....then the reder would not understand what he was reading....text can be comprehended only if it is read for meaning the first place, reading to identify words is both unnecessary and inefficient.

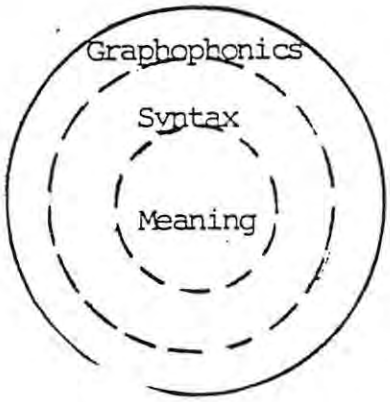


Fig.2.4: MEANING CENTREDNESS[6]

Holmes, too, stresses the centrality of meaning, an aspect which is underscored by psycholinguists. Smith (1971) says:

> Before you can utter a sentence you must know what it means. Only the meaning of the entire sequence will tell you the syntactic role of the individual words, which for some words is essential for any decision about intonation.

The reading process consists of sampling, selecting and predicting. It is a process in which the reader uses confirmation strategies as he procedes. He is constantly alert to information which contradicts/.....

alert to information which contradicts his expectations. If what he is reading contradicts his expectations, he regresses and reprocesses the information and may even have to form new hypotheses about what to expect further on. Reading becomes a process in which the reader has to sample, predict, test, confirm and correct when necessary. Goodman (1973:22) says reading is:

> ...a psycholinguistic process by which the reader...reconstructs, as best he can, a message which has been encoded by a writer as a graphic display.

When the writer writes, he already has his ideas in his head. He chooses the words and structures with which to express the deep structure(his ideas). Since the deep structure precedes the surface structure(written text), the surface structure does not present any ambiguity to the reader. He uses the same strategies the writer uses. He comes to the text with meaning. In the words of Smith (1978:76):

> Everywhere we look for sense, and in language we have a good idea in advance of what the nature of that sense is likely to be....We may not be able to predict exactly what a writer or speaker is going to say, but we know enough not to consider unlikely alternatives.

The analysis-by-synthesis model[7], based as it is on Chomskyan theories of language, has as its basic unit the sentence. The same criticism levelled at the letter and word emphases, are now directed at the emphasis on the sentence. The communicative theorists contend that:

> ...language does not occur in strange words or sentences, but in connected discourse ..arbitrary conglomerates of sentences are indeed of no interest except as a check on grammatical description (Harris 1952).

Sentences as abstract linguistic objects can be inferred from discourse, but they do not actually occur in language behaviour. In the words of Widdowson (1978:22) :

> Normal language behaviour does not consist in the production of separate sentences, parts of sentences, or single words; but in the use of these units for the creation of discourse.

With the focus on isolated sentences, only the formal linguistic structures and their relations within the sentence can be examined. This knowledge of the grammar does not ensure overall underlying knowledge and ability for language use which involves far more than knowledge of grammaticality.

Lewis (1983:50) uses the theme aspect to highlight the difference between the sentence and discourse models. He points to the linear processing of the sentence model as distinct from the non-linear structure of the discourse model.

On the same topic, Van Dijk (1977:132) says:

> Sentential topics...determine the distribution of information along sequences of sentences, whereas discourse topics seem to reduce, organize and categorise semantic information of sequence as wholes.

Without disregarding intra-sentential relations, the emphasis has shifted to the communicative value of language, viz. discourse.

2.5 Emphasis on discourse

Coulthard (1978:8) admits to existing confusion over the size of basic units of discourse. Some linguists define it as an utterance (contextualized); others as a sequence

of sentences /.....

of sentences. Halliday et al (1976:10) define discourse as:

> a unit higher than the sentence, for example the paragraph, or some entity such as episode or topic unit.

The implication is that discourse goes beyoud the sen = tence and requires utilization of larger units of language (Widdowson 1978:22). Widdowson (op cit) defines discourse as "the use of sentences in combination." Use refers to the functions of sentences in constructing logical development (coherence), whereas sentence combination refers to the cohesive nature of discourse. Coherence and cohesion are thus essential properties of discourse.

Cohesion refers to the overt, formal linguistic features used in establishing links in a piece of discourse. It has a textual function which enables the user to construct text or connected discourse. In the words of Halliday et al (op cit,4), it occurs where" the interpretation of some element in the discourse is dependent on that of another. The textual function is realized by such devices as referen= ces, substitutions, ellipses, conjunctions, logical connections and transformations.

Coherence refers to the relationships that obtain between ideas, i.e how they are linked. The links are not overt or formally linguistic, but are established through the content of the message; they have to be inferred. This is made possibly by : (a) recognition of theme or topic; (b) recognition of language functions; (c) identification of textual organization, e.g. information structuring; and (d) recognition of the principles of co-operation.

2.5.1 Cohesive devices

Reference as a cohesive device is characterized by the specific nature of information that is signalled for retrieval

Referential meaning refers to the identity of the parti= cular thing or class of things that is being referred to;

and the cohesion lies/...

and the cohesion lies in the continuity of reference, where= by the same thing enters into the discourse a second time. Anaphora or anaphoric reference points back to some previous item. Consider this simple rhyme:

> Three blind mice, three blind mice
> See how they run ! See how they run !

The word they refers back to the three blind mice.

The definite article the (omitted, therefore ellipsis) refers to a noun already mentioned or understood and falls in the category of anaphoric reference since it points back. It also functions anaphorically since it copies certain fea= tures of a previous noun.

Demonstrative reference refers to retrieval "by means of location, on a scale of proximity" (Halliday et al, 37). For example:

> I like the lions, and I like the polar bears. These are my favourites - Those are my favourites too(ibid).

The demonstrative these refers to that which is near, and those to that which is 'not near'.

Cataphoric reference, as apposed to anaphoric reference, points forward, and is often used to indicate instructions or listings as in :

> A. This is how you must do it: Mix....
> B. These are the properties of discourse: cohesion and coherence.

Substitution and elipses, according to Halliday (op cit,88) "can be thought of...as processes within the text: substitution as the replacement of one item by another, and elipses as the omission of an item." The following sentences contain examples of substitution (Halliday et al, 1976:89)

My axe is /.....

> My axe is blunt. I must get a sharper
> one. You think Joan already knows? -
> I think everybody does.

Both one and does are substitutes: one substitutes for axe, and does substitutes for knows .

In the sentence:

> You think Joan already knows?

the do preceding "You..." has been deleted (omitted).

In addition to the examples given above, there are different types of substitution(nominal and verbal), and ellipsis (nominal, verbal and clausal).

Conjunctions and logical connectors play a very important role in cohesion. Halliday(op cit,226) describe conjunctive elements as:

> (devices for) reaching out into the proceding (or following) text,...they express certain meanings which presuppose that presence of other components in the discourse.

The simplest form of conjunction is and. Together with or they form relations which are structural rather than logical. The conjunction and is used cohesively to link one syntactic unit with another; its relation is therefore coordination.

Logical connections have more than just a structural function. They are in the sense that they link sentences, but they have a higher order relation than the coordinating function. They express specific semantic notions such as:

- cause, eg. therefore, because;
- reason, e.g. because;
- result, e.g. in consequence, consequently;
- concession, e.g. seeing that, since, as, although, in view of the fact;

-condition, e.g. /....

- condition , e.g. if ;
- conditions with temporal relations:
- time, e.g. when;
- prior time, e.g. before
- sequential time, e.g. after, then and thereafter;
- simultaneous time, e.g. while, as ;
- adversatives, e.g. but, in spite of, although
- exclusion, e.g. except;
- inclusion, e.g. moreover, in addition to;

These cohesive elements make it possible to handle text without unnecessary complication.

Transformations such as relativization, complementiza= tion and gerundivization make the relationship between two sentences intra-sentential. This involves the incorporation of one sentence into another, e.g. :

Relativization: The dog which bit the postman was shot. The word which is a relative marker. The sentence:

The dog bit the postman

is incorporated (embedded) in the matrix sentence:

The dog was shot.

Complementization: That John failed amazed me. The word that is a complement marker. The sentence:

John failed

is incorporated (embedded) in the matrix sentence:

It amazed me.

Gerundivization: John's failing the test amazed me.

The -ing plus the possessive marker 's are the gerundive agents which incorporate the sentence:

John failed

into the matrix sentence:

It amazed me.

The above overview of cohesive devices (by no means exhausted) outlines the rule of usage which accounts for linguistic competence in the Chomskyan sense: they represent

the language /.....

the language user's knowledge of the formal systems of his language. They constitute his basic grammatical source of reference.

Now follows a discussion of coherence which is concerned with higher order aspects of information processing.

2.5.2 Coherence

Theme or Topic exists across the sentence and the dis= course level - sentential theme and discourse theme. Lautamatti (1978), in an attempt to develop distinctions between the two, specifies the following parameters:

1) Initial sentence element(I.S.E.) which may be presented by any lexical or syntactic element.
2) Mood subject, which occupies the syntactic position of subject in the clause or sen= tence.
   (a) Topical Subject, which represents what we have called the discourse or global theme.
   (b) Non-topical-Subjects, which correspond to the situation where the sentence theme is not equatable with discourse themes.

Recognition of theme is made possible by the following textual features:

-Information Structuring (Given/New) in which given information normally precedes new information, although this rule does not always apply (topicalization, in which new informa= tion is moved to the left, is an example). Dahl(1976) lists the following kinds of Given/New information:
(1) Previously mentioned(in the text v. Not previously mentioned).
(2) Known v. Not known (in terms of world knowledge of the reader).
(3) On-stage and off-stage (corresponding to

activated and / .....

activated and non-activated....).

(4) Predictable v. Unpredictable.

- Communicative Importance which is "related to the semantic properties of the text elements" (Lewis 1983:55). Not all the text elements are of the same importance. Their importance will vary according to their function within the message. Also of varying importance are the characters, events and objects; as well as relationships of cause and effect and motivation.

- Communicative Dynamism, which refers to "the extent to which the sentence element contributes to the development of communication" (Firbas 1964) This aspect is the product of the combination of all the features mentioned above, viz. theme, information structuring and communicative importance. Lewis(1983:55) says that: new information must be added and new relationships made in order to develop communication.

Recognition of illocutionary acts such as complaining, requesting, asserting, exhorting, etc. also facilitate text processing. According to Heatherington (1981:419-421), there are two types of illocutionary force. One is implicit and unstated like assertions, imperatives and questions (interrogatives). The other type is explicit and stated. In speech acts, explicit illocutionary forces are marked by performatives, eg. ' I tell you,..' ; 'I pronounce you...'; etc. The former is more intricate and depends, for recognition, on communicative competence, i.e. effective utilization of contextual- pragmatic knowledge.

The principle of cooperation requires that the language user (1) be relevant, and (2) be economic (give only necessary information). This is illustrated by the example supplied by Coulthard (1979:10):

A. Can you go to Edinburg tomorrow?

B. B.E.A. pilots /.....

B. B.E.A. pilots are on strike.

A infers meaning (B cannot go to Edinburg) from the relevance and the context in which B's response is uttered. Because of shared knowledge(B's going to Edinburg by aeroplane), B utters only that which is necessary.

Cohesion and coherence provide us with rules of usage and rules of use respectively, which enable us to interact through negotiations of meaning. This interaction creates hierarchical structures whereby the combinations of proper= ties and illocutions builds up to form larger units of com= munications, i.e. discourse.

As already stated above, utilization of contextual-pragmatic knowledge is essential for effective text proces= sing. The context is the environment (scenario) presented by the text. To make sense of the text, the reader must have a practical knowledge of the context of what he is reading. In the words of Robinett (1980:359),"A lack of contextual-pragmatic knowledge bedevils us all." The importance of this aspect is poignantly illustrated by the problems of E.S.L. learners. Morris (1968:162) says:

> The major weakness in the reading problem of E.S.L. students...is the fact that, in all too many instances, the initial reading step is performed: the child decodes the symbols and produces the word - and stops. The word fails to trigger anything because the concepts it represents to us and to the author do not exist for the child, or they exist in a limited, vague form.

The reader brings his own experience (knowledge) to bear on the text, and he responds to ones offered by it.

Harri-Augstein, et al (1982:52-53) define reading cues as:

> ...signposts planted by the author to tell the reader how to get at the content of the text.[9]

Even before/...

Even before the actual reading starts, the efficient reader utilizes 'signposts' such as the title, the subtitle, the table of contents, the index, the publisher's blurp on the jacket, the date of publication, the format or setting out of the information, and the abstract.

In the actual reading, the reader utilizes less obvious cues which are buried in the text, viz. those that indicate where the reader is going("I shall discuss the theory of.."); those that tell the reader where he has come from ("I have already presented the main points..."); those signposts along the road(" My next point is..."),etc. (op cit, 53)

Harri-Augstein, et al (ibid) list signposts that are more subtle: those which indicate inferences ("The references are clear..."); those which indicate fairly accepted princi= ples("To summarize the main ideas..."); those which express opinions("My own feelings are..."); and those which indicate restatement logically equivalent to the passage being resta= ted("Put another way..."); etc.

Harri-Augstein, et al (op cit, 54-57) also indicate another type of cue, viz. content cues which help us to arrive at the meaning of a text. These can be categorized into two groups, viz. syntactic and semantic cues.

Syntactic cues assist with anticipation of parts of speech of words that follow. For example, the words following the are usually nouns. As indicated under Syntactic Relations (pp.9-94), "sensitivity to grammar (as) explained by the concept competence" is based on the utilization of syntactic cues.

Semantic cues, according to Harri-Augstein,et al (ibid)", are also powerful". They enable the reader to make inferences, deductions, and correct choices. These are the cues that

enable the reader /....

enable the reader to make hypotheses, thus indicating that sensitivity to context cues are crucial for efficient reading.

Harri-Augstein, et al (op cit,57) list four categories of content cues, viz. :

- syntactic or semantic cues
- forward or backward cues
- cues within or across sentences
- cues relying on either text content or reader's knowledge.

A discussion of reading cues is a restatement of the properties of discourse, but, whereas cohesion and coherence are properties of the text, reading cues on the other hand, refer to the active appeal of the reader to these properties.

Another aspect which will determine the way the text is apprehended and consequently affect its processing, is reading purposes.

Reading purposes are important: the way the text is read will vary with change in purpose. For example, if one seeks one item of information, skimming may be quite adequate. However, if several items of information, or the understanding of a complex theory is required, skimming will not suffice.

Harri-Augstein, et al (op cit, 36-38) propose a purpose hierarchy according to level of generality, as illustrated above. Arrangement of purposes in a hierarchy assists the reader to organize his reading; one purpose may require reading of the whole book, whereas another may require only reference to certain chapters or paragraphs.

Another aspect of reading purposes is clarification. This helps the reader identify appropriate sources and guide him

in their use./.....

in their use. At a lower level, clarification helps the reader apply the tactics required to realize desired outcomes.

Harri-Augstein, et al (op cit, 41) give a comprehensive purpose taxonomy, illustrating the relationship between purposes and comprehensive skills:

5.	Extrapolation	Inferences beyond the text. Implications in other situations. Creative divergence from author's ideas. Use of imagination. Putting forward a hypothesis.
4.	Evaluation	Appraisal of opinions, arguments Critique of style. Judgement on main theme, details. Assessment of message's importance value.
3.	Appreciation	Appreciation of style, mood, nuances. Structure of text, choice of words. Metaphor, analogies, similes. Quality of rhetoric, images. Range and nature of agreement. Aesthetic responses.
2.	Reorganization, analysis and synthesis	Identification of ideas and their restructuring into summary or abstract. Classification of ideas. Paraphrase. Interpretation of viewpoint.
1.	Literal	Identification and remembering of details, ideas, opinions, concepts, instructions, examples, inferences criticisms, "signposts."

as indicated above/.....

As indicated above, there is a close relationship between reading purposes and reading skills.

The term "skills" is used rather loosely; it is often applied to strategies and tactics, terms which themselves pose problems of isolation since they are not always mutually exclusive.

Grellet (1981:4-5) lists the following:

- Recognizing the script of a language.
- Deducing the meaning and use of unusual lexical items.
- Understanding explicitly stated information.
- Understanding information when not explicitly stated.
- Understanding conceptual meaning.
- Understanding the communicative value (function) of sentences and utterances.
- Understanding relations within the sentence.
- Understanding relations between the parts of a text through lexical cohesive devices.
- Understanding relations between parts of a text through grammatical cohesion devices.
- Interpreting text by going outside it.
- Recognizing indicators in discourse.
- Identifying the main point or important information in a piece of discourse.
- Distinguishing the main idea from supporting details.
- Extracting salient points to summarize (the text, an idea, etc.).
- Selective extraction of relevant points from a text.
- Basic reference skills
- Skimming
- Scanning to locate specifically required information.
- Transcoding information to diagrammatical display.

Grellet (op cit) dispenses with mutually exclusive categories. Harri-Augstein, et al (op cit, 13-33), on the other hand, attempt to distinguish techniques from tactics.

Strategies are defined as "the ways we read", eg. whether the book is read straight through, or whether it is read bit by bit, alternating the "bits" with pauses for reflection or note-taking.

Tactics are more local. They are defined as "the basic read patterns(which) combine in various ways to form an overall reading strategy" (op cit, 16).

Grellet (op cit, 14-19) groups strategies into four classes which include, in Harri-Augstein, et al terms, skills and strategies :

1) Sensitizing

This group includes strategies which enable the reader to "tune" into the text, thus enabling him to cope with unfamiliar words. This ability utilizes the following strategies:

- Inference, which makes use of "syntactic, logical and cultural clues to discover the meaning of unknown elements" (ibid);
- Understanding relations within the sentence which refers to readers' ability to grasp sentence structures, especially complex ones like embedded and relative clauses;
- Linking sentences and ideas which enables the reader to deal with devices used to create textual cohesion such as link words and references, as well as inferences.

2) Improving Reading Speed

This category refers to the readers' ability to go quickly through the text, employing techniques and skills like scanning and/..

scanning and skimming. Its importance is obvious: readers who read slowly are easily discouraged or stumble over unfam =iliar words.

3) Skimming and 4) Scanning.

Skimming and scanning are specific techniques necessary for quick and efficient reading.

Skimming means "going through the text quickly in order to get the gist of it, to know how it is organized, or to get an idea of the tone or the intention of the reader" (ibid). It requires an overall view of the text.

Scanning, on the other hand, is locating specific infor= mation by letting the eye wonder over the text. It is limited to information retrieval.

The two techniques comprise the following subskills:

-Predicting. Grellet (op cit,17) insists this is not a technique but a skill which is basic to all the reading techniques." It constitutes the faculty of predicting or guessing what is to follow, making use of grammatical, logical and cultural clues;

-Previewing. Unlike predicting, it is not a skill but a specific technique employed in skimming and scanning, making use of "the table of contents, the appendix, the pre= face, the chapter and paragraph headings" in locating required information (op cit, 17).

-Anticipation. It involves the reader's active participation in the text. It enables him to develop "expectancies," to make hypotheses and check these out for confirm =ation or revision.

2.6 Summary and.../

2.6 Summary and evaluation

Reading defies simple definition. At best it can be explained in terms of language development as perceived by theorists who advocate a particular emphasis. From the historical development of reading theory has emerged a clearly defined progressive pattern: from emphasis on the letter, to an emphasis on the word, to an emphasis on the sentence, and an emphasis on discourse. Each stage mirrors prevailing theories of language development.

2.7 Notes on Chapter Two

1. (p.23) Mechanical skills are generally referred to as lower-order skills. They are the basic skills of reading from left to right, down the page. It includes word recognition, also referred to as "word attack skills". In oral reading, conversion of printed symbols into sound would constitute mechanical or basic skills. Normally, comprehension is not regarded as being of primary concern.

2. (p.29) The audio-lingual method has its roots in beha= vioural psychology - the Skinnerian stimulus-response (S-R) theory. It views language as a set of habits, assuming that learning to read is learning a new set of habits repeated consciously, later produced automatically. The stress is oral production and aural comprehension, hence the label audio-lingual. Approaches to language were developed by descriptive linguists Leonard Bloomfield and Charles C.Fries, and methods were formulated (1961) by William Moulton.

3. (p.30) The term "mediated word recognition" was coined by Frank Smith (1971:160). It refers to the phenomenon of first converting print to sound and meaning before it is identified. It is the opposite of immediate word identification. Mediated word identification is a term which is synonymous with decoding, as opposed to encoding.

4. (p.31) Guy T.Busswell filmed subjects while they were reading and pictures of eye movements were analysed, thus lending empirical validity to his observations.

5. (p.36) Transformational linguists adhered to the Gene= rative Transformational (G-T) theory of grammar. It views language as a set of rules, viz. generative rules which account for the formation of language rules; and transformational rules which account for all the changes

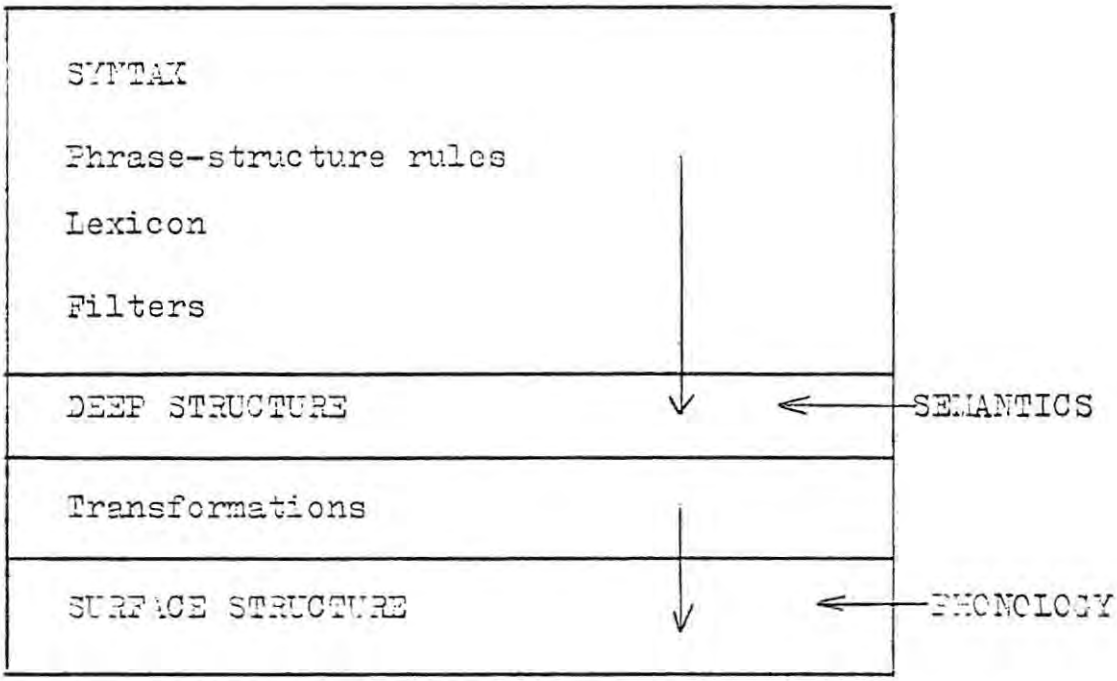
that can be/.....

made in the basic sentences of the language (Lyons 1973:12).

6. (p.41) Smith and Wilson (1979) designed a similar model:

FIG 2.5

TRANSFORMATIONAL GRAMMAR COMPONENTS



7. (p.38) For a description of the analysis-by-synthesis model, see Chapter Three (3.102).

8. (p.46) On signalling, Lloyd (1958) says it should not be forgotten that...

> It is not the words that give meaning to the sentence: it is the sentence that assigns meanings to the words in it. We approach vocabulary by way of structure.

CHAPTER THREE

REVIEW OF THE LITERATURE: ISSUES RELATED TO READING

3.1 Introduction

Reading is not an isolated skill. It is,indeed, the presence of a multitude of factors, which makes it such a complex process. Any study of the reading act is incomplete if no attempt is made to establish which relationships obtain between reading and cognitive and language activities.

Aspects isolated for discussion are:

(1) reasoning (3.2)
(2) intelligence (3.3);
(3) writing (3.4);
(4) silent reading (3.5);
(5) meaning (3.6);
(6) interpretation (3.7);
(7) meaning memory models-(3.8) word-and-(3.9) sentence memory;
(8) skills models (3.10)
(9) developmental progression of reading skills acquisition (3.11);
(10) visual operations (3.12); and
(11) psychological operations (3.13).

3.2 Reading and Reasoning

Since reading involves complex skills, it must be assumed that it entails more than perception and memory of shapes and sounds. Access to meaning in the text requires the reader to organize the processes which make perceptual reasoning possible. Vernon(1971:78) cites findings by Piaget which show that children do not develop this ability until they reach the "concrete operational" stage [1] of intelligence /.....

stage [1] of intelligence at 6-7 years and upwards. Children below this age are deficient in the capacities of abstractions and generalization necessary for the grouping of objects; that is to say, grouping similar objects into mutually exclusive categories" (Inhelder and Piaget 1964). Children below this age will also have pro= blems with "conservation" which requires "an understanding of the more abstract concepts of number, volume, weight, etc. such that it is realized that these may remain con= stant when the location and distribution of objects is altered" (ibid). These insights suggest a positive relationship between conceptional reasoning and effective reading which is maturationally determined.

Several studies have been made which suggest that read= -ing achievement may be related to the ability to form concepts. Goins(Smith and Deschant 1961) found that poor readers had difficulty in selecting common elements from among a group of similar objects.

In yet another study Braun(1963) presented children of 8-13 with sets of four words each. They had to choose one word in another set. The scores correlated highly with reading test scores.

> 'Under-achievers', whose reading age was below their mental age, performed significantly worse at all ages than did 'over-achievers' whose reading age was above their mental age. More-over, the latter continued to improve their performance as age increased, through ability to form the more abstract concepts. The 'under-achievers' could not do this, and improved little between 10 and 13 years(Vernon 1971:81-82).

Rabinovitz, et al (1954) /...

Rabinovitz, et al(1954) had similar results. Back= ward readers showed a lack of ability to formulate concepts of size, number and time.

Not all studies in this field proved the relationship between reading and reasoning conclusively. Lovell, Shapton and Warren (1964) conducted research in which 50 children of normal non-verbal intelligence but with R.Q.s[2] below 80 were compared with normal children. They were presented with certain of Piaget's spatial-conceptual tasks; they had to judge:

(a) the level of water in a tilted vessel;
(b) the relation of a ship and its mast to the sides of a tilted flask; and
(c) the orientation of objects on a slopy hillside.

The scores obtained did not show any significant difference between the groups. In addition, different measurements(e.g. Watts language tests and Piagetian tasks) yielded varying results. The varying results cloud the validity of the experiment. It can therefore be assumed that, though no relationship is established, there is a positive relationship between performance and concep= tual reasoning.

Kagan(1965) distinguished between children who were impulsive in making judgements with children who were more reflective. He found that the reflective children, though slower(because they were thinking), made fewer errors while reading.

Since readers, with increasing efficiency, employ greater conceptual reasoning with increasing complexity of text, it can safely be assumed that there is a positive relationship between reading difficulties and lack of con= cept formation.

3.3 Reading and Intelligence/..

3.3 Reading and Intelligence

The findings on the relationship between reading and reasoning suggest an obvious relationship between reading and intelligence since it is generally accepted that there is a relationship between intelligence and reasoning. The problem, however, is more complex since there are various types of intelligence, i.e. verbal intelligence and non-verbal intelligence determined by differing types of measurement, i.e. the Stanford-Binet Moray House Picture Intelligence tests. Vernon(1960) established that poor readers performed badly on group verbal tests because they were unable to read the test material easily. It is therefore impossible to establish the relationship between intelligence and reading ability in this case. Intelligence tests in themselves are not reliable indicators of intelligence, since different tests give different ratings : [3]

To overcome the problem encountered by Vernon(1960), Ravenette(1961) administered tests orally to children of 8-11 years. He found a high correlation between the scores obtained(using the Terman-Merrill/Stanford-Binet test)[4] and scores obtained in the Schornell Graded Word Reading test[5] (a test of word recognition) and on the Crighton Vocabulary Scale, and concluded that "there would appear to be good evidence that reading achievement is associated with intelligence as assessed by verbal tests."

The findings of Phillips(1958) and Vernon(1971) show contrasting evidence. They compared reading scores with scores obtained in: (a) group non-verbal tests(05-0.65); (b) group verbal tests(0.6-0.75); and (c) individual verbal tests such as the Terman-Merril(0.65-0.8).

Kellmer Pringle and Neale(1957) compared Schonell and Gates reading scores of children of 8 years with scores obtained in the Moray House Picture Intelligence test and obtained correlations of only 0.3-0.5.

This conflicting evidence/...

This conflicting evidence suggests that the relationship between reading test scores and intelligence test scores is dependent on the type of reasoning employed in the latter.

Vernon(1971:85-86) issues two warnings against certain assumptions:

(i) high intelligence does not guarantee successful reading achievement; and
(ii) reading achievement is not necessarily determined by tested intelligence.

Though the evidence cited so far is quantitatively inconclusive, the findings are qualitatively positive. Bliesmer(1954) found no difference in the scores of $10\frac{1}{2}$ -$12\frac{1}{2}$ year old children with I.Q .s of 72-84 on tests of word recognition. The tests did indicate, however that the more intelligent children were significantly superior to the less intelligent in grasping the main ideas of the text and in drawing inferences from these. This suggests a relationship between reading and two types of learning, viz. rote learning and learning which involves conceptual reasoning.

The conflicting evidence shows the complexity of the concept"intelligence". Vernon(1971:87) found that "backward readers scored relatively badly on the information, Arithmetic, Digit Span and Coding sub-tests; whereas they performed relatively well on the Picture arrangement, Picture Completion and Block Design sub-tests." Graham (1952) and McLeod(1965) obtained low scores for backward readers on the Vocabulary test, whereas Altus(1956) and Robeck(1964) found Vocabulary test scores were adequate. Lovell, et al (1964) showed that backward readers performed badly on Vocabulary, Coding, and Block Designs, while Clarke(1970) found "no significantly low scores on any sub-tests among 8-year-old children with R.Q.s of 85 and below."

Vernon(1971:94) sums up the/.....

Vernon(1971:94) sums up the evidence as follows:

> ...it would appear that the relationship of reading and the intellectual abilities is not well understood, and much further investigation is required to determine what particular types of intellectual processes are essential in learning to read.

3.4 Reading and Writing

The surface relationship between these two modes of communication is obvious: readers read what writers have written; writers write that readers might read. The relationship, though, is not as simplistic; it involves complex cognitive processes. The latter is dramatically illustrated by the "poor" relationship "poor" readers have with written text, and the fact that some texts "read" better than others. Comments by writers provide valuable insights. Wright(1966: xxxi) says that:

> Always,as I write, I was both reader and writer, both the conceiver of the action and the appreciator of it. I tried to write so that, in the same instant of time, the objective and the subjective aspects .... would be caught in a focus of prose. And always I tried to render, depict, not merely to tell the story.

The writer, even when he writes for the sheer love or compulsion to write, is his own audience. He engages in an "interior dialogue" (op cit,xxxi). Murray(1976:4), a writer in his own right, also believes that the writer should be his own audience. He is in search of himself and if he finds himself, he will have found his audience. The search of himself will lead to certain truths about himself which are shared by many others. All he has to do is develop these truths and put them in terms which the reader will understand. In order to do so, he must remember where he is going; he must have a sharp awareness

of his position. This/...

of his position. This is an aspect of rhetoric which refers to "the ability to hold larger and larger units of discourse together" (ibid).

Shaughnessy (1976:11) refers to the new perception of the writing process: it is rhetorically based, i.e. the audience and purpose play a prominent role. She refers to the relationship between the writer and his audience as a "bargaining in speech" which involves "the economics of energy in the writing situation". That is, the writer says what he wants to say with as little energy as possible. The writer must be able to understand the expectations of his audience.

This study isolates five types of relationships between reading and writing:

(1) Both are secondary processes. The two processes are similar insofar that both are learned after the child has developed speech. (This does not imply they cannot be learned in the absence of speech). They are therefore secondary language processes. They are so closely related that there is much argument about which should be taught first and whether they should be taught at the same time. Carol Chomsky (Wilson 1981:899-901) even suggests that the normal practice be reversed and writing be taught before reading, decidedly overtones of the language experience approach.

(2) Both are creative/composing acts. Hairston(1982:85) says that writing is an act of discovery. Writers know only part of what they want to say. They develop their ideas as they write. Wright (1966:xxx) writes :

> With the whole theme in mind, in an attitude almost akin to prayer, I gave myself up to the story (Native Son). In an effort to cap= ture some phrase of...life that would not come to me readily, I'd got down as much as I could. Then/.....

> as I could. Then I'd reread it over and over, adding each time a word, a phrase, a sentence until I felt that I had caught all the shadings of reality I felt dimly were there. With each of these rereadings and rewritings it seemed that I'd gather in facts and facets that tried to run away. It was an act of concentration of trying to hold within one's centre of attention all the bewildering array of facts which science, politics, memory, and imagination were urging upon me. And then, while writing, a new and thrilling relationship would spring up under the drive of emotion, coalescing and telescoping alien facts into a known and felt truth.

Wright tells from a personal perspective how writers explore, discover meaning and form, working back and forth. The writing process is therefore an active process.

And reading? It has for very long been regarded as a receptive process, a passive act which exactly mirrors the writing on the paper. Current understanding of the reading process, however, sees reading as an active process. Wilson(1981:896) quotes Goodman(1967) in defining reading as sampling, predicting and confirming. The reader, like the writer, works back and forth. The reader is engaged in an active process in which meaning is created by exploration and discovery. Just as the writer rethinks and rewrites, the reader samples, revises, confirms or rejects, and regresses. Just as the writer becomes emotionally involved in his creation, so also does the reader respond to the text by bringing his "bewildering array of facts which science, politics, memory, and imagination" - his whole world experience - to the text.

3) Their development is ../

(3) Their development is similar to language development.

The processes operant in reading and writing are subject to the same rules as language. Wilson(1981:897) says that:

> ...oral language learning is characterized by the internalization of rules, through the mechanism of hypothesis formation and testing.

In learning to speak, the child does not merely imitate, but forms hypotheses, generalizes rules, and tests them out. The same happens(or should happen) in reading development.

Reading, like writing, is not an exact act. The reader does not read every word. He even substitutes since he brings his own knowledge of language to the text(Sims 1975: 103).

(4) Neither can be taught. Wilson (1981:897) says:

> Reading, like language, should develop naturally when opportunities for reading in natural contexts and situations exist, and the procedure may also operate for language development .

The natural development takes place through "exposure to and practical experience with the use of language in actual, natural contexts and situations" (ibid). Learners make use of this experience to make "expectations about the function, purpose, and system of written language" (ibid). Learners learn to read by reading, and learn to write by writing. The effectiveness of both reading and writing will depend on language development and range of experience.

(5) Both have a meaning core. Although writing is transformation of the deep structure into surface structure, and reading the reconstruction of the deep structure through sampling cues in the surface structure, access to meaning -

deep structure-is indispensible if both these processes are to be effective.

To test whether a reader understands what he is reading, David Bleich(Petrosky 1982:24) suggests that readers write down what they have read. He(Bleich) calls this the reader's response to writing:

> Response is, then, an experience of comprehension; and expression of comprehension and comprehension means using writing to explicate the connections between our models of reality - our prior knowledge - and the texts we create in light of them.

Meaning-reconstruction of the deep structure-is expressed in terms of appropriate response to text. Roland Barthes(op cit, 26) says that:

> ...writers, like readers, are influenced in responding by the exigencies of their familiar personal past, but they are influenced in responding and writing by pressures beyond their immediate awareness, such as broad cultural expectations and influences of history and tradition....

The elements mentioned by Barthes constitute the transaction of knowledge between the writer and the reader. If writer and reader do not share these, there cannot be any "negotiation" for meaning. The text ceases to be meaningful if the elements referred to by Barthes are not shared by both reader and writer.

In concluding the discussion of the relationship between reading and writing, Meyer(Petroskey 1982: 47) offers this synthesis:

> The relevance of research on reading for that on writing(and vice versa) should be obvious, since the two processes are complementary.

3.5 Silent Reading

Since comprehension is regarded as central to reading, attention should be focused on that form of reading generally associated with reading comprehension : silent reading.

James McDade(1937) observed, while working in Chicago schools in the middle thirties, that all forms of reading that involve any kind of "vocal translation of symbol" is harmful to the development of good reading habits. He refers to the sweeping reform during the 1915-1925 period which saw oral reading substituted by silent reading. Academics realized, some seventy years ago, that meaning should enjoy prominence over recognition, and that this could only be achieved through silent reading.

Been(1979:5-23) comes out strongly in support of silent reading. She says that:

> Once the "mechanics" of reading are achieved, any reading aloud - including the first reading by the teacher - should be discouraged, for it treats reading as a linear activity; the pupils follow the words as they are read, and therefore read every word (albeit subvocally), and follow the text linearly.

Been's criticism of oral reading is shared by West (1941), Busswell(1945), McDade(1957;1937), Bever and Bower (1970), Smith(1971), Mackay, et al (1972), Cazden (1972), and Ferguson(1973). They argue that oral reading discourages the development of sound reading habits; oral reading forces the reader to decode meaning, thereby justifying the concept that reading is a receptive skill, a passive "activity" in which the reader merely retrieves the meaning of the text. Smith (1971:204) cites research which shows that the active reader does not read every word. The fluent reader, he claims, has his fixations placed"where they are likely to yield optimum information;

this means that the reader's eyes ../

this means that the reader's eyes may move down, across, up and back" (ibid).

Reading every word, as required by oral reading, is a slow process since every word has to be first perceived visually, and then assigned an oral counterpart. Smith (op cit, 90-94) argues that in order to apprehend meaning, reading must be fast.

Thorndike(1917) also comes out strongly in favour of silent reading. He writes (ibid):

> In school practice it appears likely that exercises in silent reading to find answers, or to give a summary of the matter read, or to list the questions which it answers, should in large measure replace oral reading. The vice of the poor reader is to say the words to himself without making judgements concerning what they reveal. Reading Aloud or listening to one reading aloud may leave this vice unaltered or even discouraged.

The"vice" seems inherent since Been says silent reading should be fostered "Once the'mechanics' of reading have been achieved". By the time the child has mastered the "mechanics", he will have formed his own ideas about reading, concepts he will have inferred from the approaches he has been subjected to. Introducing silent reading afterwards means reversing the process. McDade(1927) actually recommends that "the silent reading lesson should in fact be one hundred per cent silent, even in beginning reading" (Morris 1963:67).

McDade devised and put to proof what he calls the "hypothesis of non-oral reading". Teachers in Chicago schools who were willing to try out his hypothesis to eliminate oral reading in beginning reading, were asked "to eliminate entirely any association between printed symbol and spoken word," and

to encourage/.....

to encourage formation of "a direct link between printed word and meaning." The demands, outlined by Morris (1963:64-65) were rigorous:

> No oral reading whatever was permitted. Parents were asked not to have the children do any oral reading at home. No word was ever pronounced by the teacher while the printed word was before the children nor was the child ever told orally a word which gave them difficulty....The attempt was to have children use print for actual communication, so that printed or written language could be learned precisely as a young child learns to comprehend spoken language...The print always carried real meanings to be acted out not to be spoken.

Reading was presented in the form of labelling common objects, aided by the use of word and picture dictionaries. All words and sentences presented were situationally functional, that is, they were used in an appropriate context. The results of McDade's "non-oral hypothesis" were so phenomenal that the resultant sweeping reforms in turn resulted in the publication of a spate of "reading-for-meaning" materials, notably Nila Bantom Smith's 101 Ways of Teaching Silent Reading. The form of presentation also turned out to be popular. In fact, they were more popular than the concept(silent reading) since the "Look - and - Say" approach has "assimilated almost imperceptably" the materials recommended by McDade.

3.6 Meaning

Since meaning has priority in reading, it is essential that views of different disciplines be examined[6]. Philosophers, psychologists, and literary critics(among others) have all attempted to formulate a definition of this phenomenon. Psycholinguists' view of meaning as deep structure has already been discussed. Attempts will be made to check its compatibility with those of other disciplines.

3.6.1 /....

3.6.1 Philosophers' View

Philosophers have a diversity of approaches and theories about meaning. Alston (1964:10-31) groups them into three main classes of theories, viz. referential, ideational, and behavioural.

The referential theory, popular because of its simple answers to the problem of meaning, contends that "very meaningful expression names something or other, or at least stands for something or other in a relation something like naming (designating, labelling, referring to, etc.)". This statement needs qualification since it would seem to contradict the psychologists' view set out above. Referential theorists belief that"(words) all have meaning, in the simple sense that they are symbols that stand for something other than themselves"(ibid). Alston (op cit) continues:

> ...for an expression to have a meaning is for it to refer to something other than itself, but they locate meaning in different areas of the situation of reference.. the meaning of the expression is to be identified with the relation between the expression and its referent, that the referential connection constitutes the meaning.

The referential theory has been found inadequate by other theorists, but it is compatible with the psycholinguistic view of meaning insofar as "something other than itself" and "relation" are the equivalent of the deep structure; that"something other" and "relation" being the true meaning the reader brings to the text. The inadequacies pointed out merely serve to emphasize the fact that there is no such thing as isolated meaning. Strawson (1968:81) stresses that a contextual requirement forms the basis of the referential theory.

The ideational and behavioural theories are based on the supposition that "words have meaning because of what

human beings /.....

human beings do when they use language "(op cit). They (human beings) bring their association of ideas or stimulus-response connections to their encounter with the text. Alston(ibid) sums up the definition of these theories as follows:

> ,..the ideational theory identifies the meaning (s)....with idea(s) that give rise to it and to which it gives rise; and behavioural theories typically identify the meaning of an expression with the situation in which it is uttered, with responses made to its utterance, or both.

These theories are not as simplistic as the referential theory, and they are even more compatible with the psycholinguistic view. The ideas are the deep structure which is formed and refined by the experience of the language user. The response theory of the behaviourists suggests that the reader responds to stimuli - ideas, deep structure- in the text; readers bring their knowledge of the world into play, emphasizing once more that the process of reading and listening are active.

The use theory.

Common to all three theories is the contextual/function requirement. Alston (1968:141) lists a number of definitions of meaning, based on the acceptance that the meaning of a linguistic expression can be defined in terms of its use, to wit:

Ryle (1957:255) says:

> ..to know what an expression means is to know how it may or may not be employed.

Patrick Nowell-Smith (1968:140) says:

> Elucidating the meaning of a word is explaining how the word is used.

J.L.Evans(1953:8) says:

> The meaning of a word is simply the rules which govern its use, and to ask for its meaning is to ask for the rules.

Strawson(1966)/...

Strawson (1966:327) says:

> To give the meaning of an expression...is to give general directions for its use to refer to or to mention particular objects or persons; to give the meaning of a sentence is to give general directions for its use in making true or false assertions.

Warnock(1963:318):

> ...to know the meaning of a sentence is to know how to use it, to know in what circumstances its use is correct or incorrect...A sentence is meaningful it it has a use: we know its meaning if we know its use.

The implication of the use aspect is obvious: meaning is not determined by single letters, words or even sentences. Meaning is determined by its environment - the context - and the associations, ideas, experiences and cultural/communal beliefs of the reader. To utilize the meaning resource of the text, it is imperative that the entire text be considered.

This concludes the discussion of the philosophers' views.

3.62 Literary Critics' Views

Literary critics are concerned primarily with meaning and its interpretation. It is these two components of any written text which determine the effectiveness or impact of literary works.

I.A.Richards(1929:174) asks the question all critics ask themselves:

> What is meaning? What are we doing when we endeavour to make it out? What is it we are making out?...If we can make use of these questions, the locked chambers and corridors of the theory of poetry open to us...

Meaning is what makes appreciation of literature

possible, not the arrangement of words. The emphasis shifts from the text to the reader, who brings his own meaning to the text.

Louise M.Rosenblatt(1978:105) is even more explicit in her assigning eminence to the meaning the reader brings to the text. She says that:

> What each reader makes of the text is, indeed, for him the poem, in the sense that this is his only perception of it....He may learn indirectly about others' experiences with the text; he may come to see that his own was confused or impoverished, and he may then be stimulated to attempt to call forth from the text a better poem. But this he must do himself, and only what he himself experiences in relation to the text is,..for him, the work.

Rosenblatt does not only emphasize the meaning the reader brings to the text, but stresses that it is the most important - more important than the writer's intended meaning. She goes on to describe what a reader does, viz. evaluating, confirming or rejecting meanings he brings to the text, or that of the writer. She sees reading as an interaction, or rather a transaction,[7] of ideas.

Wolfgang Iser(1978:120) cites Frank Smith:

> Meaning is at a level of language where words do not belong...Meaning is a part of the deep structure, the semantic,cognitive level. And you may recall that between the surface level and the deep level of language there is no one-to-one correspondence. Meaning may always resist mere words.

Iser repeats what has already been discussed elsewhere in this study. He tenders extension to this definition by claiming that meaning is "an effect to be experienced." He continues(op cit, 38) :

...Meaning is/.....

> ...meaning is neither a given external reality nor a copy of an intended reader's own world, it is something that has to be ideated by the mind of the reader.

Iser has married the theories of psycholinguists, and ideational and behavioural theorists, evidence that these theories, though grounded within frameworks of different disciplines, are compatible and influence each other.

3.7 Interpretation

Since each reader brings his own meaning to a text, it is obvious that different readers will have different interpretations, depending on their experiences and associations. The same reader may have different interpretations of the same text if read at different times, depending on his mood. Edward Sapir(1921:41) says:

> Most words, like practically all consciousness, have an associated feeling tone...They rarely have the rigidity of the control, primary fact.

This may suggest that the text is so open as to defy any one specific meaning, but this would be chaotic ! To counter this, there must be constraints which would curb "uncontrolled," "runaway" interpretations of meaning. Bleich(1978:7) contends that the use of language (in all its facets- performance and interpretation) depends on the beliefs in meanings. Bleich(op cit) says:

> These beliefs have no other source than the assimulated social uses of language. We believe in the meanings given words by certain authori= tive people.

Bleich, a firm believer in Subjective Criticism (the title of the book), substantiates what Rosenblatt(op cit,88) says about text constraints: the clues provided in the text may at once excite the reader's response and lead him

to eliminate what/.....

to eliminate what is irrelevant from what is to be incorparated into his sense of the "meaning" of a text. Novey (1967) and Levy (1963) stress "the construction of a frame of reference which best suits our purposes." Novey (1967) says:

> The effort to create a "coherent and continuous picture which makes good sense" grounds the search for any sort of knowledge in the logic of interpretation.

Though the text is open to interpretation, the validity of any such interpretation must be evaluated against lexical constraints, and 'truths' which exist within a framework agreed upon (negotiated) by the majority of the members in a community.[8] Bleich defines this 'truth' as that which "all parties <u>feel</u> when an interpretation is accepted" (Bleich 1978:85)

Novey's (1967) definition aptly summarizes this discussion:

> ...the idea of interpretation can be applied to explain or render comprehensible (or less puzzling) any "mysterious" human experience.

There are opposing views on interpretation. E.D.Hirsch(1967:4) argues that valid interpretation is only possible if the author's meaning in a work of literature is determined; the meaning lies in the text. The assumption implicit in this argument is that the author's meaning is recoverable, asserting that: (a) we share the meaning of the words with the author and (b) that literary forms and conventions create meanings. In his critique of this assumption, Bleich(1978:94) argues that (1) recovery of the author's meaning is to devalue the act of interpretation; ii) interpretation is not a decoding or an analytical process. He argues that interpretation is a synthesis of new meaning based on the assumption that the old shared meanings of

words and works are not in question, but that the present perception of these meanings have created the experiential circumstances for resymbolization.[9]

3.8 Word Meaning Models

Word meaning is the most basic research area. Meaning is described in terms of semantic memory structures, "restricted to our experiences with and knowledge about single words"(Lovett 1981:12). Several lexical memory models have evolved, viz. the hierarchical model of lexical memory; the lexical marking model; and the global or "memory for meaning" model. Included in the review are sentence memory models, viz. the assimilation model and the procedural memory model.

3.81 The Hierarchical Model

This model is also referred to as the "cognitive economy" model. It was designed by Collins and Quillian (1969,1972). They contend that "the meaning of a word is remembered in relation to its superordinates and to its constituent properties"(Lovett 1981:12). The principle dictating this model,viz. the principle of "cognitive economy", organizes the properties of a word from general to specific. Properties like fur and skin, for example,` are general properties of animal and mammal, while mane is more specific to lion. The hierarchical organization of the properties of lion would (given the properties above), be as follows: superordinates mammal and animal; generic = fur and skin; and specific =mane (Nilson and Kosslyn 1975). Collins and Quillian speculate that :

> ..the greater the distance in the hierarchy between the subject of a sentence and the subordinate or properties assigned it, the more processing time would be required for its verification.

Collins and Quillian conclude that high -specificity properties, e.g. mane , will be processed quicker than low-specificity properties, eg.skin.

Nelson and Kosslyn/..

Nelson and Kosslyn (op cit), in a citique of the model, argue that meaning is not stored in hierarchical fashion. They propose an interactive model which attempts to explain memory as an interconnecting network.

3.82 The Lexical Marking Model

This model is closely related to Collins and Quillians "cognitive economy" model. It postulates that word meanings are represented by "marked" and "unmarked" lexical features (Carpenter 1974; Clark and Card 1969). "Marked" features (e.g. short) are frequently forgotten because of their linguistic complexity, causing a shift in memory to less complex "unmarked" features (e.g. tall).

3.83 The Global or "Memory for Meaning" Model

In his criticism of the above two models, Schulman (1974) contends that recall is not affected by distance between the subject and its assigned properties, or by the "markedness" of its features, but rather by the context in which it appears. Recall, according to Schulman, is affected by the "congruous or meaningful context of a word" (Lovett 1981: 13)

3.9 Sentence Memory Models

These models are based on the theory that what is stored in memory is not single words, but sentences embodying statements on propositional logic.

3.91 Human Associative Memory(Ham)Model

This model was constructed by Anderson and Bower(1973). They postulated that "all long-term memory information...is propositionally(i.e. declaratively) presented." The representation attempts to explain "the parsing of a sentence into independent associations" (ibid). For the model to function effectively, complex sentences have to be parsed since only single propositional sentences are accommodated. In an attempt to remedy this shortcoming, Anderson(1976) updated HAM, and his resultant ACT model accommodates multi-argument relational structures.

Lovett's criticism/..

Lovett's criticism is that both HAM and ACT models are restricted to literal subject - predicate constructions.

3.92 The Interpretive Model

According to Lovett (op cit, 13), the interpretive model is based on semantic feature theories, and memory can be explained in terms of linguistic analyses of sentences. It has its roots in transformational linguistics(Chomsky 1965) and feature analysis of word meaning (Clark 1969 and Katz and Fodor 1963). It is quite adequate in its accommodation of complex sentences, but, according to Gibson and Levin(1975), it is limited in its applicability to discourse processing.

3.93 The Assimilation Model

This model is based on the theory that what is stored is the product of interaction of semantic information with the reader's existing knowledge structures. Barclay(1973) says this memory product "may embody information not contained in the sentence and therefore not available from its linguistic analysis."

The model is influenced by Piagetian constructs. It dates back to Sir Frederick Bartlett's (1932:206) assertion that:

> ..an organism has somehow to acquire the capacity to turn around upon its own schemata and to construct them afresh.

Babrow and Bower (1969) required one group of subjects to generate their own mnemonic sentences, and another to rehearse equally meaningful but experimenter - generated sentences. The former displayed greater recall of word pairs than the latter.

Kintsch and Monk (1972) presented different groups of subjects with passages of varying complexity. Questions were then posed about information that was not explicity

stated and required /.....

stated and required inference. They found no difference in the latency of current responses across groups. Their findings prompted Lovett (1981:14) to conclude that:

> the same information acquired from structurally different sources assumes an equivalent representation in semantic memory.

The theory on inference was confirmed by Bransford, et al (1972). Their subjects confused old and new sentences where the new sentences were potential inferences of the old. They concluded that subjects went beyond the given information, thus implying that both the given information and the implied information was represented in sentence memory.

The model has proved to be consistent and therefore has greater credibility than the interpretive model which, in spite of refinement, still has shortcomings that cannot be overcome within the framework of its underlying theory.

3.94 The Procedural Memory Model

Addressing the question of what is stored, Kolers(1973;1975 a;b) contends that it is not abstract representation of content that is stored, but the procedures for encoding their comprehension. Kolers' theory approximates Neisser's (1967:285) theory which claims that what is remembered is:

> ....traces of prior processes of construction. There are no stored copies of finished mental events, like images or sentences, but only traces of earlier construction activity.

Kolers concluded that, instead of storing sentences, what was stored is knowledge on how to encode sentences.

3.95 Summary

There is a clearly discernable pattern in the development of meaning memory models which is obviously influenced by prevailing cognitive theories.

3.10 Models of Reading Skill

Theories of reading and meaning discussed above have contributed to the development of several models of skills.

3.101 The Gough Model

The Gough (1970) model is based on the theory that reading is a precise, linear activity. It assumes that, in beginning reading, the reader already has a lexicon, a comprehension device, and a phonological system to which needs be added a recognition device and a decoder which will convert the recognized symbol into sound. The model has the following limitations:

- -reading is regarded as converting print into sound;
- -it cannot account for the acquisition of meaning; the acquisition of meaning is a mystery; and
- -it does not account for developmental acquisition of skills.

3.102 The Analysis-By-Synthesis Model

This model is based on the theories of Goodman(1973) Kolers(1970) and Smith(1971;1973). It attempts to explain developmental issues not dealt with by the Gough model. It claims that beginning readers utilize all the clues presented by print; i.e. (for the beginning reader) it is a linear process. The reader decodes, suggesting a mediated identification stage which precedes comprehension. As the reader becomes more proficient, he derives meaning directly from print, thus diminishing the risk of overloading short-term memory. The cognitively uneconomic stage of beginning reading is replaced by a more efficient stage based on cognitive economy. The limitation of this model lies in its failure to explain how the transition from mediated meaning to direct meaning takes place; it lacks specificity.

3.103 /.....

3.103 The LaBerge and Samuels Model

The problem of specificity of the Analysis-by-Synthesis model is addressed by this model. La Berge and Samuels(1971) deal more adequately with developmental issues, specifying two criteria, viz. accuracy and automaticity. The model defines reading as a skill consisting of independent component processing. All readers go through the same stages of aquisition. Individuality is brought about by the rate of acquisition by the various readers. The model is limited since it does not explain the mechanics of the skills, but it has scope for refinement, i.e. aspects of reading skills can be elaborated.

3.104 The Interactive Model

The models discussed thus far attempt to define reading as a linear bottom-up process, i.e. a process in which acquisition of lower-order skills(e.g.recognition) precede that of higher-order skills. There is, however, considerable top-down movement. Normal children, according to Lovett(1981 :28), bring sophisticated discourse processing skills to their first encounter with text - skills they presumably developed in the context of oral language development. Lovett(ibid) concludes that:

> ...early reading behaviour is an interactive phenomenon almost from its inception and probably never resembles the linear bottom-up process that has commonly been depicted.

With the above-mentioned considerations as a starting -point, Rumelhart(1977) designed an interactive model that accomodates developmental change in both directions. The model presupposes an interactive definition of skilled reading, i.e. there is an interdependence of higher- and lower-order processing skills. Even the earliest reading reflects an interactive nature which, with development, becomes increasingly more interactive. Reading proficiency is, therefore, determined by the degree or extent of skills interaction.

3.105 /.....

3.105 Model-Building Assessment

Gibson and Levin (1975) vehemently resist model-building . Their rationale is that the reader, with increasing efficiency, increasingly perceives text economically. Like LaBerge and Samuels (1971), Gibson and Levin (op cit) define meaning as semantic feature sets, thus alligning themselves with interpretive theorists. They admit to the inadequacy of this theory in its applicability to discourse.

3.106 Summary

The models discussed fail to adequately account for the problem of development of skills acquisition. Few studies have directly addressed this issue. A review of generally accepted theory is required, particularly since this study has at its core the development of skills.

3.11 Developmental Progression of Reading Skills Aquisition

Marsh, et al (1982:200) developed a cognitive-developmental theory of reading. They base their theory on two basic assumptions:

- any cognitive achievement is the result of the interaction of a complex organism with a complex environment; and
- any cognitive process goes through a number of stages which change qualitatively with development.

Having formulated their rationale for a developmental theory, the theorist have set about describing developmental change. The core concepts of their approach are knowledge, strategies and meta-knowledge. Knowledge refers to the information and cognitive structures which are present at any given stage; it refers to the child's cognitive competence. Strategies refer to the processes a child uses to cope with environmental inputs; they are products of the child's knowledge and the developmental task demands. Meta-knowledge refers to the child's abilities to reflect upon and verbally describe the knowledge and strategies which they have and are using (ibid).

Marsh, et al /...

Marsh, et al(1981) discuss four stages of development types or strategies, viz. linguistic guessing; discrimination net guessing; sequential decoding; and hierarchical decoding.

3.111 Linguistic Guessing

During this stage, the young child decodes by rote association. For example, the child contres on the first letter and associates it with the oral response;i.e. whole-word recognition is the product of recognition of the first letter. If the association is lacking, the child does not recognize the words and resorts to guessing, substituting a syntactically and semantically appropriate word into the sentence frame. The child utilizes the context to arrive at the appropriate word. If, however, the unfamiliar word appears in isolation, the strategy will be of little use.

Biemiller(1970) observed a transitional period during which the child attempts to co-ordinate context and graphemic information. If he fails in establishing this co-ordination, he will do one of two things: refuse to guess or say he does not know the word.

Linguistic guessing is inadequate for the following reasons:

- -it sometimes produces semantically / syntactically anomalous sentences,
- -it is of no use if the word appears in isolation; and
- -its product,even if semantically and syntactically appropriate, is not acceptable to most teachers.

3.112 Discrimination Net Guessing

During this stage the child relies more and more on graphemic input. Recognition of the first letter only does not suffice; the child needs more features, e.g. word length, final letter, etc. to guess at the unfamiliar words. The strategy depends on the minimum number of features necessary to identify the unknown word; i.e the child uses a discrimination net," a mechanism which distinguishes one printed word from another.

3.113 /.....

3.113 Sequential Decoding

During this stage, readers uitilize combinational rules to decode novel words. Marsh, et al (op cit, 204-205) list two factors which influence this strategy:

> -an increase in the number of items in the print vocabulary, forcing the child to abandon linguistic guessing and discrimination net guessing since they are inadequate;
> -an increase in cognitive processing capacity as the child moves into the concrete operational stage of development; the transition from stage one to three is therefore naturalistic.

3.114 Hierarchical Decoding

During middle childhood, the child dispenses with sequential decoding which depends on one-to-one correspondence, since it produces errors on more complex rules of orthography. For example, he learns the rule that the letter c is pronounced /s/ when followed by i, e and y as in city, and /k/ when followed by a, o and u as in cute. This ability depends on "an increase in cognitive processing capacity" (Marsh, et al 1981:206). This establishes, beyond doubt, that the development of hierarchical decoding strategies are naturalistic.

3.115 Summary

Research in the area of natural development of strategies has so far been limited to decoding skills. Recognition of nonsense words and performance on discrete point tests concentrate on serialization of features. The strategies have not been fully tested to assess children's performance in processing properties of discourse, possibly because existing studies are limited to beginning reading.

This study will continue where Marsh, et al left off. It will attempt to trace the development of discourse processing skills in children who have already acquired those discussed above. It is, however, considered necessary to study the visual and psychological operations which are common

to all the theories/..

to all the theories and models discussed thus far.

3.12 Visual Operations

A French ophthalmologist, Javal, noticed that the eyes, while reading, move in jerks or saccades (Venezkey 1976:10). There are two types of saccadic movement: one is a stop-start movement when reading a line, and a return sweep at the end of a line; the other is a jump against normal progression, as in regression. Venezkey (ibid) diagnoses the latter as a symptom of poor reading, whereas Smith(1971: 99) sees it as a phenomenon common to all readers, good and poor.

Saccades are not restricted to reading; the environment is sampled visually in this fashion. Smith(ibid) says that in reading they are perceived as "proceeding from left to right across the page, although, of course, our eye movements also take us from the top of the page towards the bottom and from right to left as we proceed from one line to the next."

3.121 Saccades

Eye movement consists of one stage of movement, and one of relative stillness. During the former, very little is seen. Smith (ibid) says that, during this movement, "The leaping eye is practically blind." The latter stage is called fixation. Fixations take up the bulk of the reading time. Tinker(1965:69) established that "for the average adult reading(silently) nontechnical material, the fixations occupy approximately 94% of the reading time while the movements occupy the remaining time" (Venezkey 1976:69). Weaver (1980:36) says:

> The saccades, or eye movements, take up only a small fraction of the total reading time - about 10 per cent of the time in rapid reading and about 5 per cent of the time in slow reading(Anderson and Dearborn 1952:107)

Smith (op cit) /...

Smith(op cit) describes saccades as fast as well as precise, the larger ones being faster than the smaller ones. For example, movement through 100 degrees takes about one tenth of a second (100ms), whereas movement through 5 degrees taked only half the time(50ms), thus lending credibility to exercises aimed at increasing eye span. Another feature of saccades is that their rate does not seem to "improve" with increase in reading efficiency.

3.122 Fixations

Fixations are those periods during which the eyes are relatively stationary. The fixations per line of print will vary "according to reading ability, type of material being read, and to a lesser degree, the physical properties of the text line width, type style, and type size." (Vinezkey 1976:11). Weaver op cit,37) reports that "the average adult reader makes about four eye fixations per second and identifies about one word per fixation.... (giving) an average adult reading speed of 240 words per minute. These statistics are confirmed by studies by Carroll(1970:292), Anderson and Dearborn(1952:177), and Dechant(1970:16). Weaver(op cit) says many readers have a rate of up to 300 words per minute which means that they either average more than one word per fixation, or both. Venezkey(op cit ,11) quotes several studies on fixation.

> Busswell (1922) found that the average number of fixations per line for 13 college students reading easy material (3.5 inch line width) was about six, with each fixation lasting for an average of 225 ms. Comparable results have been found by Ballantine (1951) and Gilbert(1953). (In Busswell's study, six fixations per line would yield seven letter spaces per fixation and reading ability, but the size of the correlation has never been satisfactorily established.

It has not yet been established what exactly happens during these pauses.

Are they really/...

Are they really long enough to take in the visual stimuli? Are they long enough to process the visual stimuli? Gilbert(1953) says"the fixation pause must be long enough in duration to allow time not only to see but also to process the visual stimuli" (Venezkey 1976:12). The next section (3.13) attempts to explain the processing that takes place during pauses.

3.13 Psychological Operations

Although Venezkey (op cit) admits to a lack of knowledge of what goes on during (and between) fixtures, several studies by Miller(1962), Smith (1971), Kolers (1973), Holmes (1976), Callary (1981), and others, attempt to explain processing in terms of:

(1) letter discrimination;
(2) seriation;
(3) word identification; and
(4) sensitivity to grammar.

3.131 Letter Discrimination

What really happens in letter discrimination cannot yet be explained. Researchers have, however, conducted studies on related aspects. According to Smith (1971:1):

> The main point about the visual aspect of reading is not that the child requires a special kind of degree of acquity to discriminate between two letters; probably any child who can distinguish between two faces at six feet has the ability to do that. The child's problem is to discover the critical differences between the two letters, which is not so much a matter of how to look as knowing what to look for.

Learners, according to Smith (op cit), look for distinctive features, i.e. those features that make one letter different to another. This process is called"feature analysis" (op cit,109). Features listed are "closedness" (Is the letter closed? e.g. o, b, d) versus "openness" (Is the letter open? e.g.c, f, w); "curvedness"

(Is the letter curved? e.g. i, k, l, v). versus "symmetry" (Is the letter symmetrical? e.g. d, f, k, r). An identification is made when any letter is tested against a set of features. Such a set of features is called a "critical set" (Smith 1971; 112).
The feature that distinguishes c from o is the fact that o is closed and c is open; the difference between n and h is the ascender in h. Smith admits this is a simplistic explanation of a process that does not yield enough featural information to explain the phenomenon of letter discrimination.

Kolers(1973: 30-31) cites several studies which attempt to explain processes related to letter identification. Kolers and Katzman (1966) presented six-letter words on a screen, one at a time. One type of words consisted of pairs which could be taken for three-letter words, e.g. cotton and carrot; another consisted of letters in which the first three or last three formed a word, e.g. single and before respectively, and words with letters which cannot be grouped into two three-letter words, e.g. dollar and knight; and yet another group contained pairs of unrelated three-letter words, e.g. six and row. The letters were screened so that each letter appeared on the same part of the screen. The amount of time (83-225 ms) for which the letters were presented and also the interval between the third and the fourth letter were varied. When the blank interval lasted up till 22 per cent of the length of expose of the letters, it did not affect word identification. Kolers (ibid) concludes from the findings that:

-sequence of letters are grouped by the nervous system;
-the likelihood of word identification increased as the duration of the individual letters are increased;
-letters had to appear for between one-quarter to one-third of a second in order for identification to occur; and

-letter recognition/.....

> - letter recognition was better than word recognition when letters were presented for 125 milliseconds each, but the reverse was true at 250 milliseconds.

Kolers (ibid) concludes that word identification is only partly dependent on the recognition of discriminability of the individual letters.

3.132 Seriation

According to Kolers (ibid), serialization involves two operations, viz. schematization and impletion. Schematization according to Kolers:

> ... provides only a general framework ... of what the visual system must construct in order to represent what has been presented.

Impletion, which follows later, concerns "ordering the array works on the results of the schematization". It involves the "three stages: scanning, to form a schema; ordering of the schematic elements; and impleting or filling in of the schematized but ordered items". The latter operation when defective, normally results in wrong seriation such as anagramatization of shorter words like was as saw and much as chum. Persistent disorders of this type occur in the impletion stage.

Seriation is also aided by what Callary (1982:292) calls "sequence constraints", those rules "which describe the printed sequence ..." Though applied to phonetics, the rule can be extended to reading; certain letters can occur in a particular position within a word. As an example, Callary (ibid) cites word initial consonant clusters of two members, the second of which is /r/, for which there are only nine possibilities in English, viz. pr- in prank, br- in break, tr- in train, dr- in drain, cr- in crane, gr- in great, fr- in front, thr- /θr/ in in three, and shr- /ʃr/ in shrank. The "sequence constraint" rule suggests that letter

identification/...

identification and seriation are dependent on the environment in which the letter occurs.

3.133 Word Identification

Holmes (1976:51-69) criticizes the assumption that, in alphabetic writing, identification of individual letters is a necessary preliminary to word identification. She claims that this assumption is founded on the belief that reading is translation of written symbols into spoken language, and the belief that reading skills can be improved through "code-cracking" instructional methods. There is, however, "little direct evidence that skilled readers identify letters en route to words"(op cit, 52). Holmes cites several studies, notably by Neisser(1967) which contradict the above assumption.

Holmes(ibid) discusses a Feature Analytic Model of Word Identification which is a simple extention of the letter identification model discussed above. This model boasts a similar feature analytical mechanism operative in word identification, with the difference that word features have an additional dimension, that of location.

An explanation of the phenomenon of word identification is summarized by Weaver (1980 :43):

> -We do not simply process a word from left to right;
> -We do not separately identify each of the letters in a word prior to identification of the word itself;
> -It may be that we process part of the visual information from all or most of the letters in a word; on the other hand, it may be that we process all or most of the visual information from just some of the letters in a word.

There is much speculation about how words are perceived and identified/...

and identified, but there is strong evidence that just part of the visual information from some of the letters in a word are identified. This is where context plays an important part. Huey (1968:111-112) concluded in 1908, that:

> Even in the more pronounced cases of letter consciousness,...it is perfectly certain that words are not perceived by a successive recognition of letter after after letter, or even by any simultaneous recognition of all the letters as such. By whatever cues the recognition may be set off, it is certainly a recognition of word-wholes, except where even these recognition units are subsumed under the recognition of a still larger unit. The only question is to which parts are especially operative as cues in setting off this recognition.

Weaver (op cit, 50) attempts to answer Huey's question

> -Consonants are more important than vowels
> -Beginnings of words are more important than middles and ends, and ends are more important than middles;
> -Some people may be relatively nonproficient readers at least in part because they have not yet learned to attend to the parts of words that provide the most useful information.

Weaver(ibid)concludes that proficient readers do not identify words by first identifying individual letters because "normal reading proceeds too fast for this." She says:

> Instead, we select some of the information from some of the letters in order to arrive at an identification of the whole word. And we do this by bringing to bear not only our unconscious knowledge of which parts of letters and words are particularly useful,

but our knowledge/.....

> but our knowledge of which parts of letter and sound patterns. We use a minimal amount of visual information and a maximal amount of non-visual information.

Weaver's theory of word identification is within the framework of current reading models which view reading as a psycholinguistic guessing-game," an activity in which the reader anticipates and predicts, and in which words are cues which help the reader confirm or reject his hypotheses. Word identification through letter identification would suggest decoding ("cracking the code") instead of encoding. The responses of effective readers in cloze texts confirm this theory.

3.134 Sensitivity to Grammar

This aspect of reading concerns features of discourse or text properties, but is limited since it is restricted to intra-sentential relations only. Specific attention is paid to parts of speech and syntactic relations.

3.134.1 Parts of Speech

Kolers (1973:38-40) cites a study by Miller(1962) in which college students' reading "errors" revealed that:

> -in substitutions of the eight classical parts of speech, three quarters of the time"a substitution was the same part of speech as the printed word", well above the 12 per cent which is the cut-off level for guesses (op cit, 39);
>
> -"nouns are almost never replaced by pronouns, nor are pronouns, conjunctions or articles ever replaced by nouns; verbs never replace articles, nor do articles replace verbs, and so on" (ibid). (See Table 3.1 below.)

Table 3.1 /.....

TABLE 3.1

SUBSTITUTION OF PARTS OF SPEECH (PER CENT) (KOLERS 1973:41)

	Printed							
Said	Noun	Verb	Adj.	Adv.	Pron.	Prep.	Conj.	Article
Noun	76	4	18	4	0	5	0	0
Verb	3	82	0.5	6	2	7	10	0
Adjective	16	2	57	12	14	4	2	5
Adverb	2	3	10	45	6	4	2	6
Pronoun	0.5	4	2	10	56	2	12	16
Preposition	1	2	6	12	0	73	10	5
Conjunction	1	2	1	4	18	6	66	22
Article	0.5	0	7	8	4	0	0	45
Frequency of errors (721)	180	161	160	61	51	61	40	25

Kolers (ibid) concludes that:

> ...when he(the reader)makes an error the reader not only tends to replace a given part of speech with another word of the same kind...but even when he does not do that there is a selective patterning to his substitution. His replacement tends to have a syntactic similarity to what is printed.

3.134.2 Syntactic Relations

Kolers(op cit, 40-42) claims that, just as the reader is sensitive to the grammatical category of words taken individually, he is also sensitive to the relationships of of words within the sentence. By analysing errors in reading aloud, he found that:

-88 per cent of errors /....

-88 per cent of errors were syntactically and semantically acceptable with respect to the preceding words in the sentence;
-9% were acceptable syntactically, but distorted semantically;
-1% were semantically acceptable, but syntactically wrong;
-2% were neither syntactically nor semantically acceptable (See Table 3.2).

TABLE 3.2

ANALYSIS OF CORRECTED VISUALLY SIMILAR ERRORS (PER CENT) (KOLERS 1973:42)

	Antecedent Words		Whole Clause	
	Syn +	Syn-	Syn +	Syn -
Sem +	88	1	19	1
Sem -	9	2	20	60

Another aspect illustrated shows that, of the 89% (compare this with the 88% above) of uncorrected visually similar errors, 61% were grammatically acceptable with the whole sentence, and only 23% violated syntax and meaning. The conclusion is that, when the substitution was grammatically acceptable, it remained uncorrected, thus confirming the hypothesis that the reader is more sensitive to grammatical relations than with words themselves. The lower half of our Table 3.3 shows that 98% of corrected errors and 100% of uncorrected visually dissimilar errors were syntactically acceptable. This, according to Kolers(ibid), visual discrepancies, but rather by what sounds(feels) grammatically wrong.

Table 3.3 / .....

TABLE 3.3

GRAMMATICAL ANALYSIS OF ERRORS (PER CENT) (KOLERS 1973:43)

	VISUALLY SIMILAR							
	Corrected				Uncorrected			
	Antecedent Words		Whole Clause		Antecent Words		Whole Clause	
	Syn+	Syn-	Syn+	Syn-	Syn+	Syn-	Syn+	Syn-
Sem+	88	1	19	1	89	4	61	2
Sem-	9	2	20	60	8	2	14	23
	VISUALLY DISSIMILAR							
Sem+	98	2	48	5	100	0	89	0
Sem-	0	0	8	40	0	0	3	9

This demonstrated sensitivity to grammar is explained by the concept competence. Heatherington(1981:336-337) contributes it to:

(1) the language user's knowledge of the language, enabling him "to know what goes where"(op cit, 336) - he knows almost intuitively which construction will or will not work;

(2) the fact that the English language is quite regular in its signalling the different parts of speech, in the words of Heatherington (ibid), "English syntax is highly positional in structure, i.e it is a word order language and words placed next to each other are usually semantically connected" (op cit,338);

(3) the fact that "groups of words in English do indeed function as single units of syntax" (ibid).

3.134.3 Summary and evaluation/.....

3.134.3 Summary and evaluation

The acquisition of recognition skills is influenced by the various theories of language, viz.

(1) the "feature analysis theory which attempts to explain identification as an operation in distinctive features of letters and words are isolated, suggesting that identification is visually-dependent, therefore linear, with meaning following(decoding) instead of preceding identification;
(2) the psycholinguistic view which contends that identification follows rather than precedes meaning, suggesting that the reader anticipates and predicts, sampling cues offered by the visual display as a test of hypotheses; and
(3) the transformational-generative grammar theory which explains reading in terms of the reader's knowledge of his language and its constituent structures, a theory which complements (2).

As stated in Chapter Two (page 23) there is "a bewildering array" of theories and models of reading and its related aspects. The review has only touched on those regarded by the researcher as more prominent and most relevant to this study. The study has not lacked available literature. The problem has been, indeed, one of deciding which should be eliminated.

From the research, the following evidence has emerged:

-the problem of reading has been identified as one of understanding the cognitive nature of reading;
-the theories that have developed since the turn of the century tend towards a psycholinguistic model;
-the study of reading and aspects related to it

requires research/....

requires research across disciplines, e.g. literature, linguistics, psychology, sociology and anthropology;
-the skills operant in reading are interactive rather than linear, hence an avoidance of such terms as "higher-" and "lower-order" skills as far as possible; and
-models of reading skills need refinement.

The validity of this study can best be summed up in the words of Yorio (1971:107):

> Linguists, psychologists, and educators have long been concerned with the nature of the reading process and the ways of effectively teaching and acquiring reading skill. The advent of generative transformational grammar, which distinguishes between a surface level of language and a deep or underlying and semantic structure, has not only provided new insights into the nature of language, but has also opened new channels of investigation in language teaching methodology.

3.14 Notes on Chapter Three

1. p.56 The "concrete operational stage" follows the preoperational stage(2-7 years) during which concept formation takes place. At this stage, however, the "concepts tend to be rudimentary and either too specific, so that 'dog' may be used to refer only to the family dog, or too general so that the word 'Daddy' may be applied indiscriminately to all men" (Hunt and Hilton 1975:148).

   At the onset of the concrete operational stage(7-11 years), "the range and stability of the child's concepts has increased enormously(but) he is still tied to the concrete here and now" (ibid). The child develops abstract thought, ability to follow logical argument and notions of objectivity, probability and hypothesis-testing.

2. p.58 R.Q=Reading Quotient. Vernon (1971:2) says:

> The Reading Quotient...is similar to the I.Q.; it is a percentage of the 'Reading Age' in years on the chronological age. Reading Ages are calculated from the average chronological ages of children making given scores on a reading test; they are analogous to mental ages.

3. p.59 P.E.Vernon(1960), on quotients, comments:

> Indeed, psychologists in America banished the whole conception of Achievement Quotient many years ago and those in Britain would do well to follow them.

4. p.59 The Stanford-Binet test is a U.S. adaption of the French Binet-Simon Intelligence test, first introduced to Stanford University by Lewis Terman, a psychologist (See also the Terman-Merrill test - a variation). It consists of age-graded series of problems whose solution involves arithmetic, /.....

involves arithmetic, memory, and vocabulary skills. The test is scored in terms of intelligence quotient, or I.Q., a numerical comparison of mental age (determined by the level of skills successfully completed) and chronological age (Encyclopaedia Britannica 1974,ix:521)

5. p.59 F.J.Schonell designed standardized Graded Word Reading Tests beginning at the five-year level by mixing words of varying length, from three to seven letters but excluding two-letter words. Words used (tree, little, milk, egg, book, school, sit, frog, playing, bun) make a list of easily pictured objects and actions.

6. p.68 As a rationale for appealing to other disciplines, Malcolm Coulthard (1977 :1) says:

> ...Bloomfield led linguists away from any consideration of meaning to a concentration of form and substance, by observing that linguits "cannot define meanings, but must appeal for this to students of other sources or to common knowledge" (Firth 1933).

7. p.72 Interaction, according to Rosenblatt, is a two-way relationship; she opts for the term transaction which attempts to capture a reaction similar to that caused by a cue ball in a game of billiards, an analogy which aptly describes the multi-dimensional nature of the relationship between the reader, the text and the writer.

8. p.74 Bleich(1978:172) says response can be negotiated "if, in all three samples, new and more elaborate information about the material already in the statement can be obtained ", the three aspects being reading orientation, reality orientation, and experience orientation.

Each group 'creates/.....

> Each group ' creates ' knowledge rather than discovers knowledge - subjective authorization of knowledge allows for intersubjective negotiation by the collective interest of the reading community (Bleich 1978: 294).

9. p.75 Bleich's epistomological assumptions include:

-Symbolization, i.e evaluative subjective response motivates, creates a need for explanation, and leads to....

-Resymbolization, i.e. the motivated explanation, interpretation, which is....

-Negotiation, i.e. negotiated within the interpretive communtiy, i.e. "validated".

CHAPTER FOUR

REVIEW OF THE LITERATURE

READING IN THE SECOND LANGUAGE

4.1 Introduction

Since this chapter forms the immediate background to this study, a detailed study of relevant research is presented. The presentation is in three parts, viz.

(1) the relationship between second language reading and the psycholinguistic theory of reading (4.2);
(2) the relationship between L1 and L2 reading, consisting of detailed discussions of significant bilingual reading studies(4.3); and
(3) a review of related studies in reading in a second language(4.4)

4.2 Reading in the Second Language and the Reading Theory

The reading theory is based on what first language readers do when they read. The question is whether the theory of the reading process applies to reading in the second language.

West (1941) says that:

> Reading is a general power. It is not confined to one language: for improvement in the ability to read one language is "transferred", and shows itself in improvement of the reading of another language.

Coady(1979:9) supports Goodman(1971) in his claim that learning to read in a second language should be easier for readers who can already read in another language. These readers already have certain skills which they transfer when

reading in a second /.....

reading in a second language. Research by Tinker(1972) shows a dramatic transfer of ability to read in English to reading in French.

Research by Oller(1972), Tullius(1971), and MacNamara (1970) shows that the number of eye fixations and regressions do not differ between native language readers and ESL (English Second Language) readers. The only difference is in the duration of fixations, a phenomenon which could be attributed to language proficiency. The L2 reader needs more time to sample context clues and to process information, but he goes about doing it in the same way the L1 reader does, albeit more slowly. Like the L1 reader, the L2 reader samples the text.

Kolers(1970) found that proficient readers in French and English read and perceive in terms of meaning rather than graphic display. The reader uses the same strategies in his L2 that he uses in his L1, namely, encoding rather than decoding. Kolers(1972) found that when readers misread, they substituted an equivalent word without correcting the miscue, and explains that what is stored in memory is meaning and not words as defined by a particular language. Again, as in L1 reading, meaning enjoys priority.

Rubin (1975:45) has observed a reluctance on the part of students to consult dictionaries, especially monolingual ones (those in the L2 only). A plausible explanation is that consulting a dictionary slows down or interrupts the reading and "can prevent the necessary synthesizing of ideas" (Coady 1979:10). As in L1 reading, speed is essential for reading comprehension in L2 reading. The fact that the L2 readers gamble on continuing the reading suggests that they, like their L1 counterparts, guess at the meaning of words, making use of context cues.

4.21 Summary/.....

4.21 Summary

The research findings support West's (1941) obeservation that reading is " a general skill". From the information given above, it can be inferred that:

(a) reading skills in L1 reading are transferred to L2 reading;
(b) the L2 reader, like his L1 counterpart, samples the text for information processing;
(c) the L2 reader realizes the essence of speed and continuity in reading for meaning;
(d) the L2 reader makes use of context cues to guess at the meaning of words.

4.3 Bilingual Studies

Very little research has been done in bilingual reading. There is a wealth of literature on L1 reading and L2 reading, but very little in L1 and L2 reading by the same person. Partially succesful comparison studies(see Devine study below) have been conducted, but regrettably few truly bilingual studies have been attempted. The explanation lies possibly in the fact that research in this field is conducted mostly in the United Kingdom and the United States, both monolingual countries. The U.K. may have its language minorities and the USA its southern states bordering on Spanish-speaking Mexico, but English remains the only official language and there is little motivation to learn the minority language. The ESL reading problems that are extensively researched are of academic interest: foreign students from non-English language countries are the concern of language centres and the programmes are aimed mostly at adult ESL students. Consequently, there are few studies of child L2 reading, and even fewer of child bilingual reading. This study, however, utilizes all available resources.

4.31 The Devine Study

Joanne Devine(1981:103-114) conducted a cross-sectional

investigation of/....

investigation of the reading of 14 Spanish-speaking adults. By using MA(Miscue Analysis), she attempts to find answers to the following questions:

> (1) Are the developmental patterns noted perhaps a general feature of learning to read?
> (2) Will adults learning to read in a foreign language evidence patterns of development?
> (3) Will any patterns of development seen in non-native adult readers resemble those found in the reading of young children learning to read in their native language?

The entire group of Mexican readers had similar backgrounds(Mexican), English experience and proficiency, and ages. They were ranked according to their English language proficiency, and then for several weeks their progress in reading proficiency was measured by miscue analysis. In order to find the relationship of L2 reading to L1 reading, Devine compared the process and results of her study to those done by Yetta Goodman (Goodman 1971).

Goodman's study was a two-year observation of four children, native speakers of English learning to read English. Goodman traced the oral miscue through greater reading proficiency levels. In Goodman's study she found a number of developmental changes as seen in the miscues as proficiency increased (i.e. increasingly able to construct meaning from text). Changes in frequency of miscues and types of miscues with respect to meaning supported her theory that developmental patterns in the acquisition of young native readers do exist.

Devine developed two hypotheses based on what she found in the literature of psycholinguistic research which suggested that (op cit, 112-113):

> Language learning is a developmental process and there are striking similarities between L1 and L2 development/.....

> L1 and L2 development, therefore,
> (1) Adult non-native readers at various proficiency levels will show different behaviour as a function of those proficiency levels; and
> (2) The patterns of change which accompany increased reading proficiency for the adult non-native readers will be similar to those reported for the young readers learning to read in their native language.

In both groups, a comparison of the high and low proficiency readers showed that the higher proficiency level tended to process larger units of meaning and language. Neither group showed any developmental pattern in miscue quantity as proficiency increased.

Developmental patterns of the cueing systems for both groups showed that, with increasing reading proficiency, the students:

> (1) produced grapho-phonic miscues which were more similar to the expected response;
> (2) tended to make more optional transformations, an indication that they were reading for meaning;
> (3) were more flexible with syntactic acceptability even without meaning;
> (4) produced a greater percentage of semantically and syntactically acceptable cues; and
> (5) showed increasingly less change of grammatical structure and meaning of the text in the miscues that were acceptable.

As proficiency increased, the readers were making greater use of the cueing systems to produce something that made sense (op cit, 112).

Although MA, based on oral reading with its built-in

limitations, one/.....

limitations, one of the best insight into reading acquisition can be seen in the correction strategy of the readers, i.e. what they do when they have produced a miscue. This allows the observation of how readers are processing the text. All the students corrected themselves at some point, and were usually successful. They showed a preference for correcting unacceptable rather than acceptable miscues.

The developmental patterns seen in the correction strategy of both groups were that increased reading proficiency brought more frequent corrections and more successful corrections. Also, as the unacceptability of the miscue increased, so did the likelihood of the reader correcting himself (ibid).

The conclusions of the Devine Study confirmed her two hypotheses. The analysis of the oral miscues in English of the Spanish-speaking adults confirms the first hypothesis: there are differences in the reading behaviour of the subjects at the different proficiency levels and these differences are attributable to changes in reading level. Also, when looking at the second hypothesis, she found that "a comparison of the specific patterns of change noted for the adult second language reader with data from the Goodman study of four young readers learning to read in their native language, English, confirmed it; the patterns of development that accompanied increases in reading proficiency for these adults are very similar to those Goodman observed in young children as they become more proficient readers"(op cit,113).

While confirming these hypotheses, Devine's research has some limitations. One problem is that it is not possible to separate reading proficiency and language proficiency.

Another limitation/.....

Another limitation already mentioned, is the relationship between oral and silent reading. The assumption is that the basic procedures are the same, though there are slight differences, but it is generally accepted that they are vastly different.

A third limitation is its scope. No study was done to find out the Spanish-speakers' reading profiency in their first language, with the result that the study fails to make a valid comparison between the L1 and L2 reading of the subjects.

What Devine has succeeded in doing is to confirm, by comparing her data with that provided by Goodman, that there is universality in reading, that the process will be the same for all languages with minor variations to accommodate the specific characteristics of orthography and grammatical structure of the language (Goodman 1973).

4.32 The Rigg Study

Pat Rigg (1977:106-117) conducted similar research: MA studies with ESL readers. The difference is in the population. The Rigg subjects are all children (grades 2, 4 and 6) from four different L1 groups, viz. Arabic, Navajo, Samoan and Spanish.

The Arabic L1 speakers were all recent immigrants, primarily from Libanon, who lived in an urban suburb of Detroit which had a predominantly Arabic atmosphere: about half the children in the school spoke Arabic, many of the stores and restaurants offered Arabic specialities, and many of the signs outside and inside these places were in Arabic.

The Navajo L1 speakers were residents of a boarding school in the Arizona Desert. The school was physically isolated from both Navajo- and English- speaking communities.

The Samoan L1 speakers/.....

The Samoan L1 speakers were recent immigrants from Honolulu and Hawaii. They lived in a housing project close to the school which did not offer a bilingual programme.

The Spanish L1 speakers were from a small ranching community in East Texas. About a third of the community and school was Spanish-speaking. There were a few Spanish signs on grocery items, menus, and store windows. The school attended by the subjects did not have ESL classes, and none of the subjects in the study had a bilingual programme.

Rigg developed the following hypotheses:

(1) there may be universals in the reading process itself;

(2) one's first language does not determine one's reading proficiency in ESL.

The subjects were asked to read two stories each, and were asked to retell. The reading and retelling were analyzed, using the Goodman Taxonomy.

The following information was obtained from analyses:

-All subjects read accurately, the miscues totalling less than 20% of the text, suggesting that "these children were better readers than they were given credit for"(op cit, 105). The children also made identical repeated miscues, e.g. substituting Keeko for Keoki.

-All subjects tended to make miscues which made sense in the text, i.e. they made semantically acceptable miscues. There was greater variation within groups than across groups.

-All the subjects regressed and correlated when miscues did not make sense .

-The subjects showed a /.....

-The subjects showed a high percentage of semantically acceptable miscues, higher than 55% before correction, indicating that they can read unfimiliar and difficult text meaningfully.

The first hypothesis was confirmed since the subjects made similar miscues, suggesting that ESL readers employ the same strategies.

The second hypothesis was not confirmed. The Navajo subjects made more miscues and fewer corrections of semantic miscues than the Spanish subjects and the researcher cannot find direct links to the subjects' use of their own language.

Rigg (op cit, 114) concludes that:

(1) ESL readers, many of whom have not mastered English yet, can read with comprehension.
(2) ESL reading proficiency is not determined by one's first language; and
(3) there are 'tentative' suggestions that "some aspects" of the reading process are universal.

Since the findings closely resemble Devine's, Rigg's confirm the assumption that adult L2 reading is similar to child L2 reading.

4.33 The Mott Study

Barbara Mott(1977) has done similar research using native German-speaking adults learning to read English. Her study describes and analyzes the oral miscues of the adults in both German and English. The analysis focuses on the differences in quality and quantity of miscues made in both languages of each person and the whole group. Her

study is / .....

study is based on the approach that reading is an act of communication in which information is transferred from a transmitter to a receiver; it is an act of language only superficially different from the comprehension of speech.

Moth discovered that the students showed to a great degree to be similarly about as proficient in reading English as they were in their native German. They also read for those complete grammatical structures that would help them get meaning in English. She also found that they attempted to get semantic control of the reading in English by increasing the quality of semantic miscues. The readers also stayed closer to the graphic representation of the reading material if their reading was less proficient than others in the group. Mott concludes that "the mature second-language student, in learning to read proficiently in the target language, must adhere to certain psycholinguistic principles that are universal. The primary tenet is reading for the express purpose of cognition. He must process information in two or three underlying language systems - syntax, semantic and phonology".

4.34 The Clarke Project

The Clarke Project (1978:122-141) is one of the few truly bilingual studies which tests the L1 and L2 reading abilities of the same reader, basing the investigation on silent reading(first test) and on oral reading(second test).

Clarke attemted to find out if:

(a) psycholinguistics could explain the reading ability of adult Spanish-speakers reading in Spanish and English; and
(b) readers transfer their skills

He used two groups of adult native Spanish-speakers, ranked good and poor readers in their native language.

In the first test/.....

In the first test, Clarke examined the results of the students' performances on a cloze test. This gave limited confirmation of his question, but "it is clear that the subjects were producing hypotheses about the text based on syntactic and semantic clues"(op cit, 130).

The results of the test for the second question were not what was expected. The good readers provided more expected responses than the poor readers, but when confronted with a difficult blank, were not much better than the poor readers in providing acceptable guesses.

In the second test, oral performances of individuals rank good and poor readers in the first language were analyzed on the guidelines of the established miscue procedures. The results were similar to those of the first study. The answer to the first question according to the miscue analysis was positive. The reading performances were essentially the same as those tested in other studies, notably Goodman's.

The answer to the second question was ambiguous. The good readers were better than the poor in both languages, yet the superiority of the good over the poor was substantially less in English.

Clarke (op cit, 137-141) concludes that the results of his study:

> (1) seem to justify some form of a reading universals hypothesis;
> (2) support psycholinguistics as a model for curriculum planning, methods, and materials developed in the teaching of ESL reading;
> (3) confirm the value of cloze tests in research into the reading process; and
> (4) confirm the value of oral miscue procedures for investigating the behaviour of adults.

4.35 The Yorio Enquiry/...

4.35 The Yorio Enquiry

Yorio(1971:107-115) conducted a study with thirty literate adult Spanish readers to show that, in reading in a foreign language, the reader's knowledge of the language is not like that of the native speaker.

He distributed a questionaire designed to find out from readers about the methods use, or think they use, to read English, the problems they think they have, and the degree of difficulty they find in the different kinds of material they have read(op cit, 108).

The results provide data which show that, on a scale of difficulty between 0(no difficulty) and 5(maximum difficulty):

-the mean response for vocabulary was the highest 3.23;
-the mean response for grammatical difficulties was only 2.19.

Yoris (op cit, 108) argues that:

-the guessing or predictability necessary to pick up the correct cues is hindered by the imperfect knowledge of the language;
-the wrong choice of cues or the uncertainty of the choice makes associations difficult;
-due to unfamiliarity with the material and the lack of training, the memory span in a foreign language in the early stages of its acquisition is usually shorter than in our native language; recollection of previous cues then, is more difficult in a foreign than in the mother tongue; and
- at all levels, and at all times, there is interference of the native language.

These problems, according to Yorio(op cit,110) are the

result of two/.....

result of two reasons:

(1) the uncertainty of the correctness of the choice made; and
(2) the impossibility of association if the choice is wrong.

A major draw-back of Yorio's conclusions is that they are based largely on readers' responses to questions in a questionaire about what they do when reading. Christopher Candlin (in the Preface to an edition by Alderson and Urquhart 1983) warns against "reliance on readers' accounts" of what goes on when they read. He says (Alderson and Urquhart 1983:xiii):

> There are too many distorting variables, linguistic, psychological and social psychological, for us to rely with equanimity on what our readers tell us they are doing when they read.

Yorio's conclusions are, however, supported by Mark A.Clarke's (1980) Short-Circuit Hypothesis which contends that, though readers seem to utilize the same basic behavious in both L1 and L2 reading(viz.sampling linguistic cues), limited language proficiency "appears to exert a powerful effect on the behaviours utilized by readers" (op cit, 206).

4.4 Research on Reading as a Second Language: An Overview

Hodes (1977) completed a study of seven-and eight-year-old bilingual children who spoke Yiddish as a first language, and English. The children were asked to read stories orally in both languages and the miscues were analyzed. Even though the languages have different alphabets and are written in different directions, the investigator found no difference in the types of miscues; the children used the same strategies in both languages.

Williamson and Young(1976) analized the miscues of thirty Spanish/English bilinguals who were paired with monolinguals.

The MA results/....

The MA results showed that monolinguals utilized grammatical and semantic cues better than bilinguals, and that the latter tended to lose comprehension. This study not only shows L1 interference in L2 reading, but it is also evidence of L2 interference in L1 reading.

Romatowski (1973) studies three Polish/English bilinguals who had moved to the USA. Although they all seemed to utilize the syntactic and semantic cues well, their Polish interfered with the syntactic system as they read English.

Grove(1979) compared three Arabic ESL students in a college ESL programme to three proficient English L1 college freshmen and three remedial high school seniors whose first language is English. Miscue analysis showed that the proficient English L1 students made the best use of syntactic cues: the remedial English L1 students and the ESL students relied more on graphophonic cues.

4.5 Summary and Evaluation

In spite of apparent contradictory findings, there is strong evidence that a very close relationship obtains between L1 and L2 reading, especially with regards developmental patterns, process and skills transferrence. Urquhart and Alderson (1983:19) best sum up available findings:

> -Despite some evidence of transfer of reading ability from one language to another, some studies of bilinguals, only moderate to low correlations have so far been established between reading ability in the first language, and reading ability in the second (foreign) language, when the same individuals are studied in both languages.
>
> -Proficiency in the language may be more closely associated with foreign language ability; reading problems are largely language problems.

Many Questions/.....

Many questions remain unanswered. Clarke(1980:203) remarks:

> Reading is perhaps the most thoroughly studied and least understood process in education today.

The field invites research, hence the present study.

CHAPTER FIVE

RESEARCH METHODOLOGY

5.1 Introduction

The research focuses on the two forms of reading, viz. oral reading and silent reading. In addition, the following relevant topics will be discussed:

-test criteria;
-the construction of the tests; and
-the test population.

5.2 Oral Reading Research

Oral reading research is measured through Miscue Analysis, or MA. The pupil is required to read aloud, and all miscues (i.e. oral responses that differ from the written text) are analysed.

The pupil is presented with a narrative text he has not seen prior to administration, and is asked to read without prompting, correction, interruption or prodding from the researcher. He is then requested to retell the story. (Details of processing are discussed below).

Miscues, i.e. oral responses (OR) that do not match the text/expected responses(ER), are recorded on a Coding Mark Sheet similar to that designed by Y.Goodman and C.Burke (1972)(See APP.IV & VIII.)The following data will be categorized:

-number of miscues per hundred words(MPHW);
-quality of miscues;
-graphophonic similarities;
-syntactic change and acceptability;
-semantic change and acceptability; and
-correction strategies.

Data obtained in the first language (Afrikaans) within a particular group are compared with those obtained in the second language, and across class groups.

But first/..

But first, the validity of miscue research needs to be established.

5.21 Miscue Analysis: A Critique

Interest in the ideas underlying MA, viz. error analysis, dates back to Huey (1908 / 1968). Miscue research, a refined and more specific form of error analysis, was started more than fifteen years ago and popularized by Kenneth S.Goodman (Goodman 1981). MA is based on the assumption that reading is a psycholinguistic process - a process which results from an interaction between thought and language (Goodman 1969; 1970; 1973)- and is defined as the "active process of reconstructing meaning from language represented by graphic symbols" (Smith, Meredith and K.Goodman 1970:247).

Of the term miscues, Karen L.Wixson (1979 :163) says:

> Oral reading errors have been renamed miscues because it is believed that they are not random errors, but rather are cued by the interaction between thought and language in the reader as written material is processed....Miscues then are expected to serve as a "window on the reading process."

According to K.Goodman (1969, 1973), Y.Goodman and Burke (1972)and Page (1972), "miscue analysis procedures are specifically designed to identify and evaluate the strategies used by a particular reader to process written material" (Wixson, op cit).

K.Goodman (1973) outlines the following basic procedure:

1. A reading passage providing a continuity of meaning is selected for the reader. The selection must be somewhat difficult and long enough to generate a minimum of 25 miscues.
2. The selection is retyped and each line is numbered to correspond with the appropriate

page and /.....

page and line from the original text, to be used as code sheet for recording miscues.

3. The reader is informed that the reading will be unaided and that he will be asked to retell the story after he has finished reading. The code sheet is marked as the reader reads the selection. The reading and retelling are tape recorded for future reference.
4. The reader is permitted to retell the story without interruption. Following the unaided retelling, the reader is asked probing questions designed to explore areas omitted in the retelling.
5. The miscues are coded.
6. Miscue patterns are studied, interpreted, and translated into instruction.

Each miscue is coded on the basis of answers to the following nine questions on the Reading Miscue Inventory (Y.Goodman and Burke 1972:49-50):

1. Dialect. Is a dialect variation involved in the miscue?
2. Graphic Similarity. How much does the miscue look like what was expected?
3. Sound Similarity. How much does the miscue sound like what was expected?
4. Intonation. Is a shift in intonation involved?
5. Grammatical function. Is the grammatical function of the miscue the same as the grammatical function of the word in the text?
6. Correction. Is the miscue corrected?
7. Grammatical Acceptability. Does the miscue occur in a structure which is grammatically acceptable?
8. Semantic Acceptability. Does the miscue occur in a structure which is semantically acceptable?
9. Meaning change. Does the miscue result in a change of meaning?

(See APP.V.)

Wixson/....

Wixson (op cit, 164) gives a list of information yielded by a profile of readers' strengths and weaknesses:

> -the degree to which the reader's miscues disrupted comprehension;
> -the degree to which the miscues are graphophonically, syntactically and semantically similar to the original text; and
> -the relationship between each miscue, the text, and the other miscues produced (Burke 1976 a).

Although proponents of miscue analysis assert that reading is a meaning-seeking process and that miscues reflect the process in operation, the procedure is not without criticism. Wixson (op cit, 171) asks "whether or not miscue analysis procedures do in fact identify the specific elements of a reader's miscues which reliably reflect his or her reading proficiency." Burke (1969) makes the following observations:

> -readers could appear to operate with proficient reading skill when gaining only minimal and superficial meaning;
> -some readers demonstrate good understanding of the selection, but whose miscue patterns indicate a large percentage of comprehension loss;
> -the reading process varies from reader to reader, as influenced by such factors as background, skills, and purpose for reading, and the structure and content of the written material, yet standard miscue procedures imply that both pattern and process are static;
> -since the passage is selected with the specific aim of generating miscues, "the observed miscue pattern may or may not be representative of the strategies used by that particular reader to process other printed material;

-since MA assumes/...

> -since MA assumes that all readers bring a highly developed language system to the task of reading (K.Goodman 1973; Y.Goodman and Burke 1972), the miscues are interpreted as if all share a common standard of competence with each other and with the author.

These criticisms suggest that MA lacks validity and needs refinement. Wixson (1979:172) recommends that:

> -the use of these procedures be limited to situations where it is possible to obtain repeated samples of a particular reader's miscues under a variety of predetermined conditions;
> -the nature and the content of the reading selections be varied with regard to each individual reader's skills and background in an attempt to present the reader with a range of reading tasks and materials.

Wixson (ibid) concedes that MA procedures "are potentially very useful as both research instruments and assessment devices." She continues:

> A major advantage of these procedures is that the analysis be conducted under reading conditions similar to those encountered in most classrooms today. Thus it is promising as a method for evaluating the various interactions which comprise the "whole" of the reading process.

The father of MA, Kenneth Goodman, admits (K.Goodman 1981:xi) to the limitations of MA procedures. He says:

> Most miscue research has analysed the reading process in individual readers and small groups of readers. We need now to examine text structure.....

It is with this awareness that this study has /.....

It is with this awareness that this study has devoted additional attention to text processing in Silent reading.

5.3 Silent Reading Research

Pupils' written responses are computed for the following data:

a. individual scores expressed as percentages;
b. group scores expressed as average percentages;
c. reliability, calculated according to the following formula suggested by Heaton (1975:157):

where N = the number of items in the text
m = the mean score on the text for all the testees
and x = the standard deviation of all the testees' scores;

d. facility value (FV) or item difficulty, using the formula suggested by Heaton (1975):

$$\frac{\text{correct U + correct L}}{N}$$

where U = the upper 27% of the scores
L = the lower 27% of the scores
and N = the number of testees;

e. discrimination index, calculated according to the following formula (Heaton 1975)

$$\frac{\text{correct U - correct L}}{N}$$

Pupil performances represent levels of skills acquisition. The skills isolated for testing are regarded as crucial to reading comprehension by, inter alia, Grellet (1981), Kennedy (1981), and Harri-Augstein et al (1982). They include:

-inferring /.....

-inferring meanings of unfamiliar lexical items;
-understanding synonymy and antonymy (association);
-anticipating structures and ideas to follow;
-scanning for specific information;
-recognizing referents in a text;
-understanding propositional development;
-ability to synthesize information;
-understanding cause and relationship;
-understanding time sequence;
-sensitivity to text structure and coherence;
-understanding communicative value of language.

Prediction is a skill that is basic to all the skills/ reading techniques listed above.

The problem is designing tests that will test these skills in isolation. Skills are interactive and never operate independent of each other- the most basic processing will involve a combination of two or more skills. The skills listed above are therefore grouped into eight categories (sub-tests I-VIII) which are not mutually exclusive.

The following formats are adopted:

-cloze procedure;
-multiple choice;
-completion /blank-filling exercises;
-matching parts;
-true/false tests;
-punctuation exercises; and
- identification of incongruous elements.

The format used is determined by the skills/skills combinations to be tested. The variety will determine testees' performance in a wide range of operations, thus eliminating the possibility of some testees being benefited / prejudiced by a particular format, alternately preventing testees from employing specific test-taking techniques which would otherwise influence validity and reliability negatively.

The research/....

The research is based on an A-Test (A=Afrikaans) and an E-Test(E=English). Each test consists of a battery of eight sub-tests (Table 5.1)

TABLE 5.1
COMPONENTS OF TEST BATTERY

SUB-TEST	SKILLS/SKILLS COMBINATIONS	// OF ITEMS
I	Inferring word meanings	10
II	Understanding synonymy and antonymy	10
III	Understanding cause and effect, and sequence	5
IV	Scanning, reference and synthesis	10
V	Previewing, anticipating	10
VI	Understanding propositional development	5
VII	Sensitivity to text structure and coherence	5
VIII	Understanding communicative value	5
		60

5.31 The Tests

Sub-test I(A and E): Items 1-10

Specific aim: To test ability to infer the meanings of unfamiliar words.

Skills involved: Deducing the meaning of unfamiliar lexical items through contextual clues.

Why? Cloze tests require testees to utilize context to find out the meaning of difficult or unfamiliar words.

How? One word in every ten (though there are deviations where necessary) is taken out of the text and must be deduced by the testee.

(Grellet 1981:32-34)

Sub-test II : Items 11-20

Specific aim: (1) To test the ability to recognize synonyms and antonyms.
(2) To test the ability to infer the meaning of unfamiliar lexical items .

Skills involved:(1) Deducing the meaning and use of unfamiliar lexical items through contextual clues.
(2) Understanding relations between parts of a text through lexical cohesion devices of synonymy and antonymy.

Why? (1) Many texts make use of synonyms and antonyms to convey their message more clearly. It is important to be aware of these lexical relations as they often help to infer the meanings of unfamiliar words.
(2) Meanings are inferred from utilization of context.

How? Scanning the text and selecting the correct option in multiple-choice items.

Sub-test III: Items 21-25

Specific aim: To test ability to understand the value of link-words and signposts indicating cause and effect relationships and chronological sequence.

Skills involved: Understanding relations between parts of a text through the use of logical connections.

Why? It is important to be able to recognize connective words. Not only are they essential to the understanding of the ideas and facts mentioned in the text, but they also indicate the rhetorical value of what follows.

How? Link-words/....

asked to guess whether these are true or false.

(Grellet 1981:61-62)

Sub-test VI: Items 46-50

Specific aim: To test abilities to make predictions and guessing when reading a text.

Skills involved: Identifying propositional development.

Why? When supplying the missing punctuation of a text, the reader tries to predict where the sentences are likely to stop and look for certain words functioning as signals of a new sentence or paragraph.

How? All punctuation has been removed from a text, and testees are required to replace it.

(Grellet 1981:57)

Sub-test VII: Items 51-55

Specific aim: To test awareness of/ sensitivity to the structure and coherence of a passage.

Skills involved: Understanding text structure and coherence through understanding relations between parts of text.

Why? When asked to find out which sentence is out of place in the paragraph, the reader is obliged to consider the topic of the passage and to find out:

(a) whether all sentences relate to the topic; and

(b) whether the sentences follow each other naturally and logically.

How? Testees are presented with paragraphs and they are required to identify the sentence

which is out of/.....

How? Link-words are taken out and testees are made to choose from given possibilities in order to complete each blank.

(Grellet 1981:47)

Sub-test IV: Items 26-35

Specific aim: To test the ability to use titles and tables of contents to get an idea of what a passage is about.

Skills involved: Previewing: reference skills, anticipation, synthesis and scanning.

Why? It is important for students to guess about a passage simply by looking at its title and a table of contents.

How? Testees are requested to read a synthesis of a story and match it with a title in the table of contents.

(Grellet 1981:58)

Sub-test V: Items 36-45

Specific aim: To test the ability to think about the theme of the passage before reading it (psychological sensitizing).

Skills involved: Anticipation

Why? One of the most important factors that can help the reader in the process of reading is the desire to read about a given subject. The more the reader looks forward to read and anticipates in his mind what the text could hold in store for him, the easier it will be for him to grasp the main points of the passage.

How? Testees are presented with statements about a passage they have not yet read, and

asked to /...

which is out of place in each paragraph.

(Grellet 1981:94)

Sub-test VIII: Items 56-60

Specific aim: To test ability to recognize the function of sentences and utterances in a text.

Skills involved: Understanding the communicative value of sentences and utterances.

Why? Whereas a given text usually has one main function only, several language functions often appear within the text. It is sometimes easy to recognize the function (e.g. through the use of indicators such as an interrogative for a question) but in many cases it may be difficult (e.g. use of a statement to convey a suggestion). This text assesses ability to recognize the communicative value of sentences and the passage.

How? Testees are presented with a text and multiple-choice items from which they have to choose answers to statements on functions of the text and its sentences.

The answers are written on an answer sheet designed to facilitate scoring. (See Annexure).

Though reading speed is critical to reading comprehension (MacMillan 1965:18), all the testees are allowed to complete the tests. Time is therefore not taken into account as a factor.

A problem of reliability exists for Standards 1 and 2 (Grades 3 and 4) because:

(a) filling in the answers on the answer sheet is a highly complex operation; and

(b) pupils in these classes are not familiar with complex written instructions.

To remedy the situation, individual technical assistance is given to all participants, e.g. only one choice should be indicated on the answer sheet in multiple-choice questions; indicate answers on the answer sheet, not on the question paper.

5.32 The Test Population

The test population consists of 50 pupils, 10 from each standard from One to Five (Grade Three to Seven).

The investigation of skills acquisition is a cross-sectional study of able readers. The pupils in each standard are ten top performers in their group, i.e they attained the highest average percentages in the 1984 end-of-the-year examinations (Table 5.3 below ; also Annexure).

TABLE 5.2

AVERAGE GROUP PERFORMANCE IN 1984 (BULLETIN)

Standard	1	2	3	4	5
Average %	89,8	80,8	80,4	79,9	75,1
+ Class Average	65	55	50	47	45

+ The averages are stipulated by the Department, in Bulletin

Though primary school tests are not standardized or subjected to rigorous test criteria, results obtained indicate, in some measure, pupil potential.

The pupils in each/.....

The pupils in each group are also more or less at the same age of maturity. The ages range from 8 years 3 months to 15 years 2 months (APPENDIX IIA).

TABLE 5.3
AVERAGE GROUP AGES

Standard	1	2	3	4	5
Average Age	8y 10m	9y 9	11y 2	11y 10	12y 7

The age averages (Table 5.4) suggest the pupils have progressed normally through the grades since the minimum age requirement for admission to Substandard A (First Grade) is $6\frac{1}{2}$ years, i.e. the child must turn seven seven before June 30 of the year of admission.

The pupils in the sample share the same home language, Afrikaans. They have relatively frequent exposure to English which is taught formally in the classroom for $4\frac{1}{6}$ hours (Std.1) to $4\frac{2}{3}$ hours (Std.5). (See Table 5.5 below). They are also exposed to English through television, the radio, newspapers and advertisements in stores and on billboards.

TABLE 5.4
ENGLISH INSTRUCTION PER WEEK

Standard	1	2	3	4	5
Hours per week	4h 10	4h 40	4h 40	4h 40	4h 40

The children also share the same background; they live in the same residential area in sub-economic municipal housing and the parents/fathers work in local factories (with the exception of one whose father is a teacher at the school), mostly in industry directly or indirectly related to motor manufacturing. The children, it must be assumed, share the same experience.

The children /.....

The children in the various groups thus share the same background, experience, mental capacity, language ability, and maturity.

The testees are above-average performers in spite of social and economic deficiencies. They are the most likely candidates for high school and, eventually, tertiary education and training. They are representative of the students who fail to complete their studies without failure, if they do not drop out before then. Performances of these primary school pupils will hopefully pinpoint skills deficiencies, and their origins. It is the plight of the student in the high school and tertiary institution which has prompted this study, hence the focus of high performers in the primary school.

The next chapter will indicate exactly the nature of the reading process and its refinement, and the acquisition of specific reading skills that are required over the primary school phase .

CHAPTER SIX
ANALYSIS OF DATA FROM ORAL AND SILENT READING

6.1 Oral Reading Research

The data from the oral and silent readings were processed separately, but should not be seen as independent. Oral miscues provide us with insights into the reading process as manifested in extensive reading; responses to questions in silent reading provide information on the components of the reading process, ie. the reading skills required for information processing in intensive reading.

6.1.1 Purpose of the Research

The oral reading research has three main aims. One is to establish what readers in the study do when they read in their first and second language. Reading is a psycholinguistic process that goes on largely unobserved, but the miscues made in oral reading provide valuable insights into the nature of the reading act.

A further aim is to establish whether there is a developmental pattern in the miscues made by the readers in the different standards; it attempts to find out if a relationship exists between miscues and primary school grades.

The third aim is to establish whether there is a relationship between miscue patterns in the reading in both Afrikaans, the first language, and English, the second language, by the same reader. If no relationship exists, possible reasons will be investigated.

6.1.2 Pupils in the Sample

The population for the entire study is discussed in Chapter Five (5.3.2). For the oral reading, one reader was randomly selected from each standard to represent his/her group. The selection was done by numbering the pupils in each standard from one to ten. The numbers were then rearranged to approximate random procedure, using J.G. Peatman's and R. Schaefer's (1942) "Table of Random Numbers from

Selected /...

Selected Service Numbers" (Table 6.1). One number was selected from each column (marked with asterisk) by moving along a randomly selected row from left to right, and the number selected from each column was matched with the order of the pupils in Appendix II A.

On the day the test was administered, the pupils whose names corresponded with the numbers for Standards 1 and 5 did not turn up (The 0 for Std 3 represented any name, and the first Std 3 pupil that turned up was taken). A pupil was selected from the group that turned up, whose rank order was nearest in correspondence to the random numbers. The procedure followed approximates scientific random sampling.

TABLE 6.1

A TABLE OF RANDOM SAMPLING*

ROW	COLUMN NUMBER					ROW
	1	2	3	4	5	
1	2	7	8	9	4	1
2	2	2	6	0	4	2
3	9	1	6	6	3	3
4	7	0	9	9	5	4
5	4	7	3	6	6	5
*6	8	2	0	2	8	6
7	0	8	7	5	3	7
8	9	4	1	9	0	8
9	5	0	0	6	7	9
10	1	9	5	4	1	10

*This table only represents part of a table of 32 columns and 50 rows.

6.1.3 Data Collection and Methods of Statistical Analysis

The instruments used for data collection in this investigation are the Afrikaans and English narrative texts (Appendix II and VIII). The rationale for the selection of the texts is outlined in Chapter One (1.2).

On June 12, /...

On June 12, 1985 the readers were called into a private room provided by the principal of the school selected for the investigation. The researcher explained the procedure: the reader was to read aloud first the Afrikaans text, retell the story without the aid of the text, and then follow the same procedure for the English text. The researcher also explained that questions would be asked after the retelling to check on detail.

The researcher later replayed each recording, and made transcripts of the retellings (Appendix VII and X) for text analysis (6.2.1.9 and 6.2.2.8). The reading miscues of individual readers were then recorded on a Coding Sheet - a typed copy of the text in which lines and sentences are numbered (Appendix IV).

Each reader was then allocated a Reading Miscue Inventory (RMI) form for both the Afrikaans and English reading (Appendix VI and IX). Each miscue was recorded on the RMI, and values were assigned for each category, viz. graphophonic similarity, similarity of grammatical function, syntactic acceptability and change, semantic acceptability and change, correction strategies, and dialectal influences (See Coding Guide, Appendix V, and also discussion on Miscue Analysis in Chapter Five, 5.2.1).

The scores for the different categories for all groups were computed manually on an electronic calculator, and inferences about developmental patterns were made from the processed data.

The scores for the different groups were compared and developmental trends plotted on a graph. Then followed a comparison between values obtained in Afrikaans and English to determine the degree of transfer of skills from Afrikaans to English.

In order to determine the relationships between scores and standards, and between scores in Afrikaans and English, the Chi-Squared statistical method was used.

Roscoe (1969) /...

Roscoe (1969) and Meddis (1975) state that the Chi-Square statistical procedure is used as a test of significance, i.e. it determines whether the differences between the observed and theoretical frequencies are significant. The null hypothesis is that no differences exist between the observed and theoretical frequencies. An example of the calculation of the theoretical and expected frequencies and Chi-Square (X^2) is shown under 6.1.4.2 (TABLE 6.4).

6.1.4 The Afrikaans Text: "Die Boervrou" (Eng. = "The Farmer's Wife")

The text was taken from a Std 3 Afrikaans basal reader (Appendix III). It deals with the experiences of people who have dinner on a farm. One of the debates in the pre-dinner discussion is on the courage and resourcefulness of men and women. All the men in the company agree that men are more courageous and resourceful than women. While sitting around the dinner table, the hostess feels a snake settle on her left foot. She asks her young son to fetch a container with milk and put it out on the verandah. One of the guests, a captain in the army, overhears this, quickly draws conclusions about the presence of a snake, and orders everyone present to sit still. The snake eventually crawls out from under the table. The company is then asked by the captain to decide who acted the most courageously and showed the greatest resourcefulness. The men agree that the women win.

Now follows a discussion of the miscues.

6.1.4.1 Miscues per Hundred Words (MPHW)

The calculation of the MPHW is a quantitative analysis of miscues. It establishes whether all the readers make miscues, whether some readers make more miscues than others, and whether a relationship exists between MPHWs and school standard.

TABLE 6.2 /...

TABLE 6.2
MISCUES PER HUNDRED WORDS

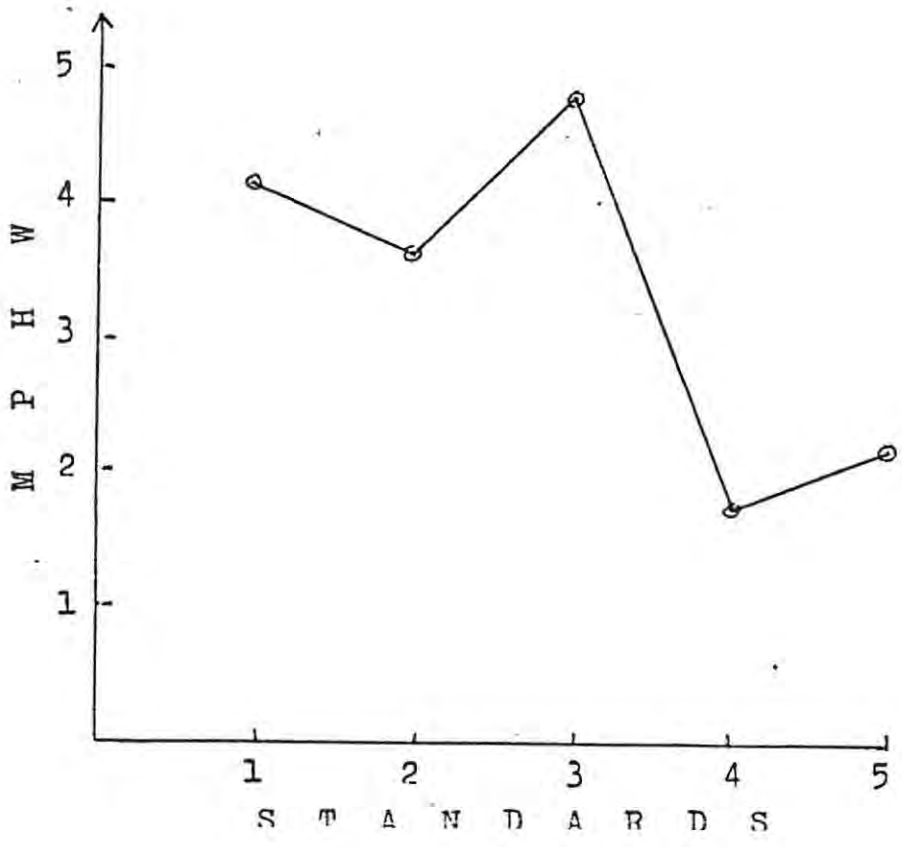
STD	1	2	3	4	5
MPHW	4,12	3,62	4,78	1,80	2,14

N = 5

The MPHW for each standard ranges from 1,80 in Std 4, to 4,78 in Std 3 (TABLE 6.2). All the readers in the study make miscues. The findings support observations made by Devine (1981) in a MA study that all readers make miscues.

There is no straight-line decrease in MPHW from Stds 1 - 5 (TABLE 6.3). Table 6.3 (graph) indicates a decrease in MPHW from Std 1 to Std 2. A possible explanation is that the Std 2 reader's recognition skills are better developed than those of the Std 1 reader. The increase in MPHW from Std 2 to Std 3 may be attributed to a transition from predominantly passive word recognition to active reconstruction of the text. Analysis of the different categories (to follow) seems to confirm this theory.

TABLE 6.3
MISCUES PER HUNDRED WORDS



The noticeable decline from Std 3 to Std 4 suggests a relative mastery of active reconstruction - readers intuitively sample cues correctly. The levelling out (slight decrease) in MPHW for the Std 5 reader may be attributed to increased active sampling. It can therefore be inferred that: all readers make miscues; there is a decrease in miscues from Std 1 to Std 4 -5, with Std 3 marking a transition stage from word recognition to sampling of cues; and the decrease in MPHW is related to advancing school standard.

The qualitative analysis which follows in the analysis of data obtained for the different categories (6.1.4.2 to 6.1.4.7) indicates how language is manipulated, and is of far greater importance than a simple frequency count of oral miscues of readers.

6.1.4.2 Graphic Similarity

The values of each miscue or observed response (OR) ranges from 0 - 3, depending on the degree with which it deviates from the text or expected response (ER). For example:

0 - no similarity, e.g. "ons" for "die";
1 - low similarity, e.g. "moet" for "maar" in which only one letter in the OR - in this case initial [m] - is similar to the ER;
2 - moderate similarity, e.g. "moet for "met" in which the words have common beginnings and endings; and
3 - high similarity, e.g. "iemand" for "niemand", in which only one letter deviates from the text.

See also the Coding Guide (Appendix V) for allocation of values.

The purpose of this research is to establish whether a relationship exists between graphic similarity and school standard. In the context of this investigation, the null hypothesis that no relationship exists between graphic similarity and school standard is retained since $p > 0,10$ (TABLE 6.4), indicates that X^2 is not significant.

This is /...

This is probably explained by the fact that graphic similarity does take into account the origin of the miscue, i.e. whether it is caused by faulty word recognition or anticipation, and its quality, i.e. whether it is syntactically and semantically acceptable.

The above inferences are reflected in the sub-categories of graphic similarity (TABLE 6.5) where low, moderate and high similarity do not show any definitive developmental trends (TABLE 6.6).

TABLE 6.4

X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT GRAPHIC SIMILARITY OF MISCUES IS INDEPENDENT OF SCHOOL STANDARD

SIMILARITY	STANDARD					TOTAL
	1	2	3	4	5	
None	1A 1 (3,5)	2A 4 (3,08)	3A 3 (4,06)	4A 2 (1,54)	5A 4 (1,82)	14
Low	1B 1 (3,0)	2B 2 (2,64)	3B 7 (3,48)	4B 1 (1,32)	5B 1 (1,56)	12
Moderate	1C 4 (5,0)	2C 6 (4,4)	3C 5 (5,8)	4C 4 (2,2)	5C 1 (2,6)	20
High	1D 5 (3,75)	2D 5 (3,3)	3D 3 (4,35)	4D 0 (1,65)	5D 2 (1,95)	15
Ommissions and Substitutions	1E 14 (9,75)	2E 5 (8,58)	3E 11 (11,31)	4E 4 (4,29)	5E 5 (5,07)	39
TOTAL	25	22	29	11	13	100

A. Determination of Theoretical Frequencies

1A $\frac{14 \times 25}{100} = 3,5$ 1B $\frac{12 \times 25}{100} = 3,0$ 1C $\frac{20 \times 25}{100} = 5,0$

2A $\frac{14 \times 22}{100} = 3,08$ 2B $\frac{12 \times 22}{100} = 2,64$ 2C $\frac{20 \times 22}{100} = 4,4$

3A $\frac{14 \times 29}{100} = 4,06$ 3B $\frac{12 \times 29}{100} = 3,48$ 3C $\frac{20 \times 29}{100} = 5,8$

4A $\frac{14 \times 11}{100} = 1,54$ 4B $\frac{12 \times 11}{100} = 1,32$ 4C $\frac{20 \times 11}{100} = 2,2$

5A $\frac{14 \times 13}{100} = 1,82$ 5B $\frac{12 \times 13}{100} = 1,56$ 5C $\frac{20 \times 13}{100} = 2,6$

1D $\frac{15 \times 25}{100}$ /...

A. Determination of Theoretical Frequencies (CONTINUES)

1D $\frac{15 \times 25}{100} = 3,75$ 1E $\frac{39 \times 25}{100} = 9,75$

2D $\frac{15 \times 22}{100} = 3,3$ 2E $\frac{39 \times 22}{100} = 8,58$

3D $\frac{15 \times 29}{100} = 4,35$ 3E $\frac{39 \times 29}{100} = 11,31$

4D $\frac{15 \times 11}{100} = 1,65$ 4E $\frac{39 \times 11}{100} = 4,29$

5D $\frac{15 \times 13}{100} = 1,95$ 5E $\frac{39 \times 13}{100} = 5,07$

B. Calculations of X^2

$$X^2 = (1-3,5)^2/3,5+(4-3,08)^2/3,08+(3-4,06)^2/4,06+(2-1,54)^2/1,54+(4-1,82)^2/1,8$$
$$+ (1-3,0)^2/3,0+(2-2,64)^2/2,64+(7-3,48)^2/3,48+(1-1,32)^2/1,32+(1-1,56)^2/1,56$$
$$+ (4-5)^2/5+(6-4,4)^2/4,4+(5-5,8)^2/5,8+(4-2,2)^2/2,2+(1-2,6)^2/2,6$$
$$+ (5-3,75)^2/3,75+(5-3,3)^2/3,3+(3-4,35)^2/4,35+(0-1,65)^2/1,65+(2-1,95)^2/1,95$$
$$+ (14-9,75)^2/9,75+(5-8,58)^2/8,58+(11-11,31)^2/11,31+(4-4,29)^2/4,29+(5-5,07)^2/5,07$$
$$= 20,50$$

$d.f. = (r-1)(c-1) = (5-1)(5-1) = 16$

$p > 0,100$

TABLE 6.5

GRAPHIC REPRESENTATION OF GRAPHIC SIMILARITIES OF MISCUES IN AFRIKAANS FROM FREQUENCIES GIVEN IN READING MISCUE INVENTORY

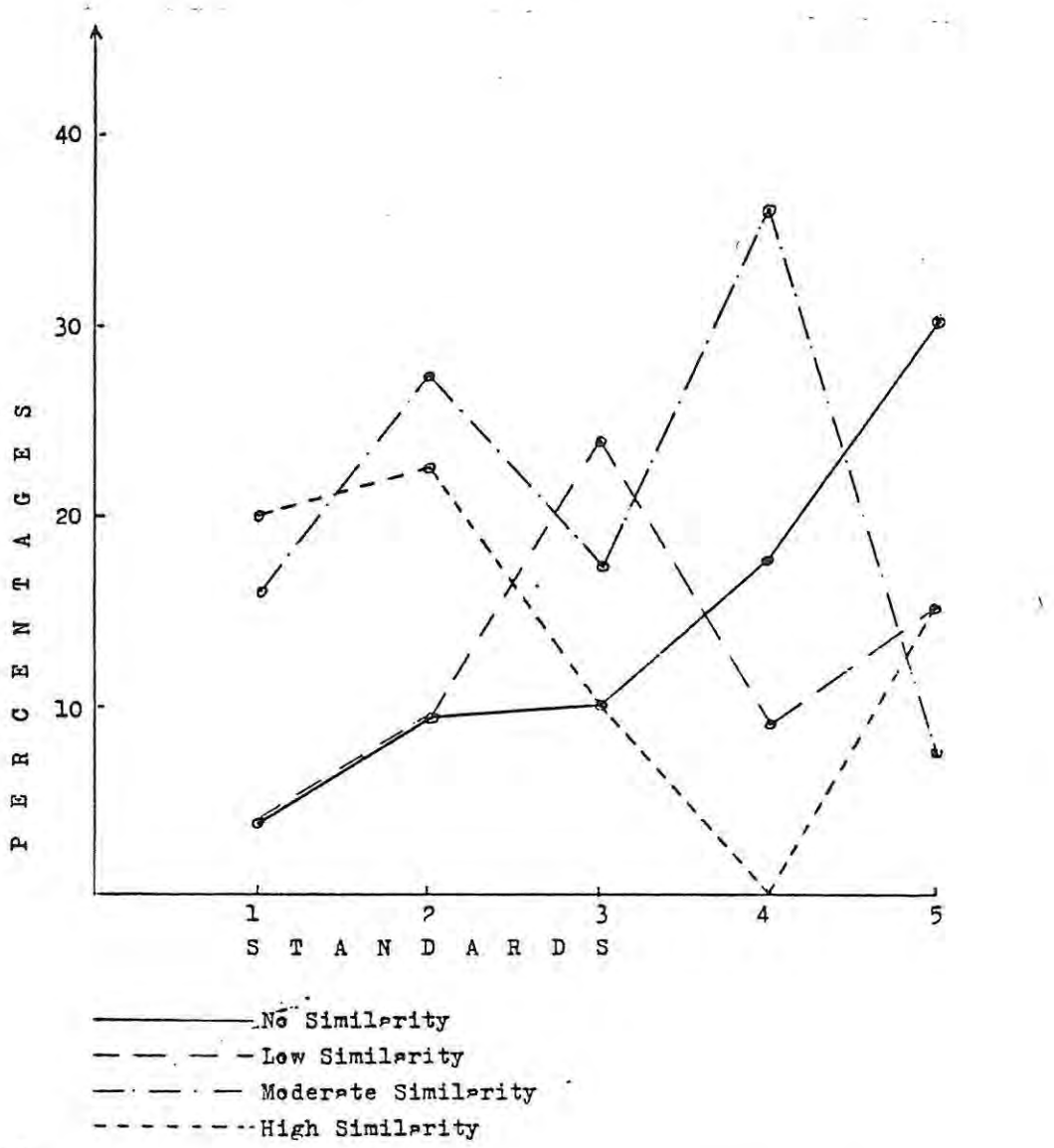
SIMILARITY	STANDARDS				
	1	2	3	4	5
None	4,0	9,1	10,3	18,2	30,8
Low	4,0	9,1	24,3	9,1	15,4
Moderate	16,0	27,3	17,2	36,4	7,7
High	20,0	22,7	10,3	-	15,4
Total	44,0	68,2	62,1	63,7	69,3
Ommissions & Sub-stitutions	56,0	31,8	37,9	36,3	30,7
%	100,0	100,0	100,0	100,0	100,0
	N = 5				

The sub-category/...

The sub-category that does show a developmental pattern is that for miscues with no similarity. There is an increase in these miscues from Std 1 - 5 (TABLE 6.6), and this phenomenon is most likely due to readers' becoming less letter/word dependent with advance in school standard.

TABLE 6.6

ILLUSTRATION OF GRAPHIC SIMILARITY OF MISCUES IN AFRIKAANS, EXPRESSED AS PERCENTAGES OF FREQUENCIES LISTED IN TABLE 6.4. (SEE ALSO TABLE 6.5)



6.1.4.3 /...

6.1.4.3 Phonemic Similarity

This category determines whether the similarity between the observed response corresponds with expected response. Since Afrikaans is a phonemic language, it is expected that, like graphic similarity, the null hypothesis will be retained, i.e. no relationship exists between phonemic similarity and school standard.

TABLE 6.7

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT GRAPHIC SIMILARITY OF MISCUES IS INDEPENDENT OF SCHOOL STANDARD

SIMILARITY	STANDARDS					TOTAL
	1	2	3	4	5	
None	1A 1 (3,5)	2A 4 (3,08)	3A 3 (4,06)	4A 2 (1,54)	5A 4 (1,82)	14
Low	1B 1 (3,0)	2B 2 (2,64)	3B 7 (3,48)	4B 1 (1,32)	5B 1 (1,56)	12
Moderate	1C 4 (5,0)	2C 6 (4,4)	3C 5 (5,8)	4C 4 (2,2)	5C 1 (2,6)	20
High	1D 5 (3,75)	2D 5 (3,3)	3D 3 (4,35)	4D 0 (1,65)	5D 2 (1,95)	15
Omissions and Substitutions	1E 14 (9,75)	2E 5 (8,58)	3E 11 (11,31)	4E 4 (4,29)	5E 5 (5,07)	39
Total	25	22	29	11	13	100

$X^2 = 20,6$

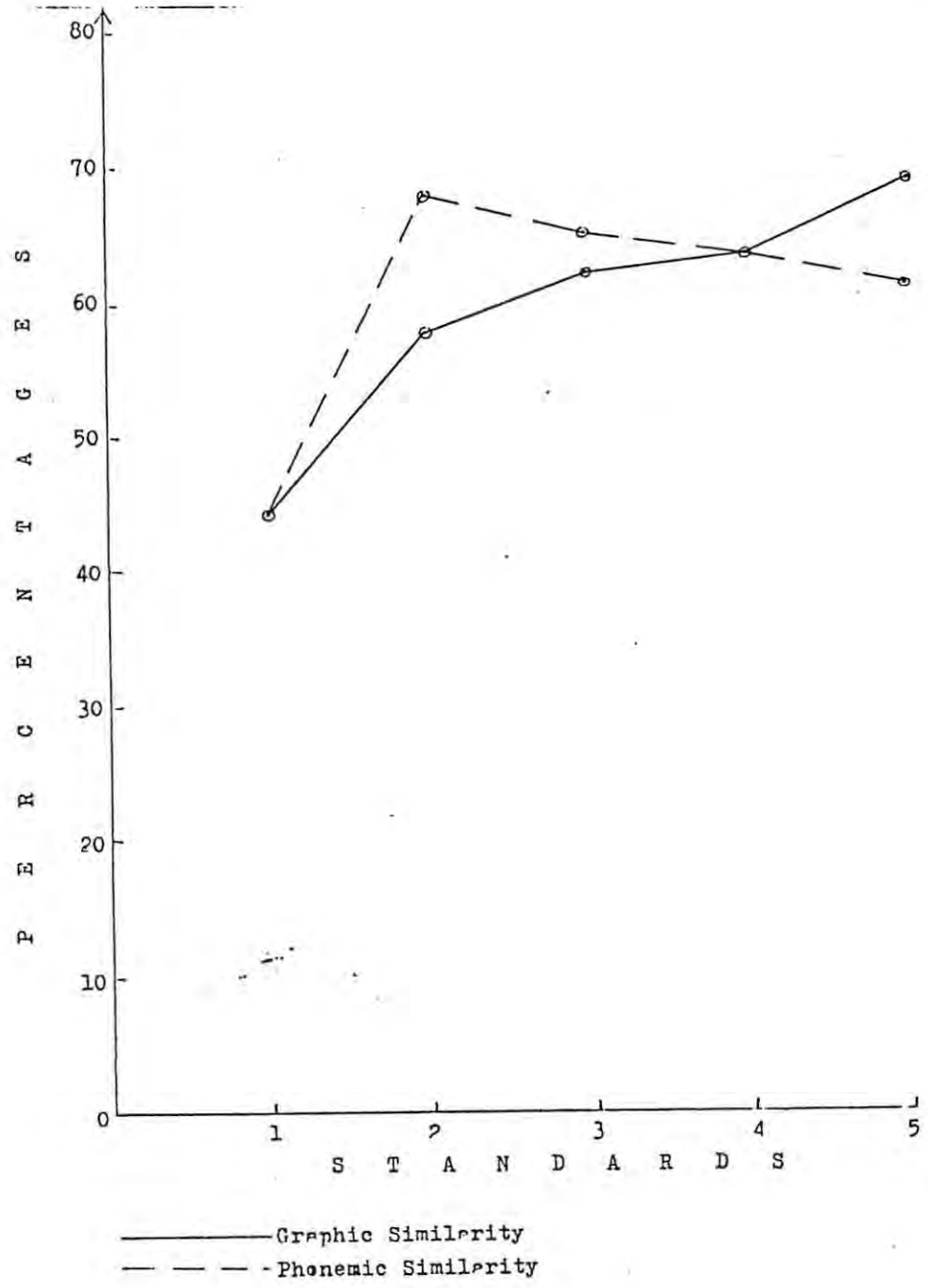
$d.f = 16$

$p > 0,250$

The significance level is tenable (nonsignificant) at greater than 25%, for the same possible reasons given under graphic similarity (6.1.4.2). The trends of all miscues for phonemic similarity correspond closely with those for graphic similarity (TABLE 6.8). Graphophonic similarity of miscues is therefore not related to standard.

Table 6.8 /...

ILLUSTRATION OF GRAPHIC AND PHONEMIC SIMILARITY OF MISCUES IN AFRIKAANS, EXPRESSED AS PERCENTAGES OF FREQUENCIES IN TABLE 6.7



6.1.4.4 Grammatical Function

The values for this category are set out in the Coding Guide (Appendix V). There are three sub-categories: (1) the OR that differs in grammatical function from the ER, e.g. "seen" is a/...

"seen" is a past participle, and "shiny" is an adjective; (2) the OR with grammatical function is similar to the ER, e.g. "pinched" and "panched" are both past tense forms of the verb, even those "panched" is a non-word; and (3) the OR of indeterminate function, e.g. "fuse" for "fussy" is difficult to determine.

Since all the readers make miscues (TABLE 6.2) the null hypothesis is that no relationship exists between grammatical function and school standard.

TABLE 6.9

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT GRAMMATICAL FUNCTION OF MISCUES IS INDEPENDENT OF SCHOOL STANDARD

SIMILARITY	STANDARDS					TOTAL
	1	2	3	4	5	
Different	1A 5 (6,25)	2A 10 (5,5)	3A 9 (7,25)	4A 0 (2,75)	5A 1 (3,25)	25
Same	1B 2 (9,25)	2B 12 (8,14)	3B 8 (10,73)	4B 7 (4,07)	5B 6 (4,81)	37
Indeterminate	1C 2 (1,00)	2C 0 (0,88)	3C 1 (1,16)	4C 0 (0,44)	5C 1 (0,52)	4
Irrelevant	1D 14 (8,5)	2D 0 (7,48)	3D 11 (9,86)	4D 4 (3,74)	5D 5 (4,42)	34
Total	25	22	29	11	13	100

$X^2 = 29,23$

d.f. = 12

$p > 0,005$

The null hypothesis is rejected since $p > 0,005$ and; therefore X^2 is highly significant. The inference is that a positive relationship exists between grammatical function and school standard.

Table 6.10/...

TABLE 6.10

PERCENTAGE GRAMMATICAL FUNCTION

OF MISCUES AS LISTED IN R.M.I (APPENDIX VI)

SIMILARITY	STANDARDS				
	1	2	3	4	5
Different	20,0	45,5	31,0	-	7,7
Same	16,0	40,9	27,6	63,6	20,7
Indeterminate	8,0	-	3,4	-	-
Sub-Total	44,0	86,4	62,0	63,6	28,4
Substitutions & Omissions	56,0	13,6	38,0	36,4	71,6
Total Percentage	100,0	100,0	100,0	100,0	100,0

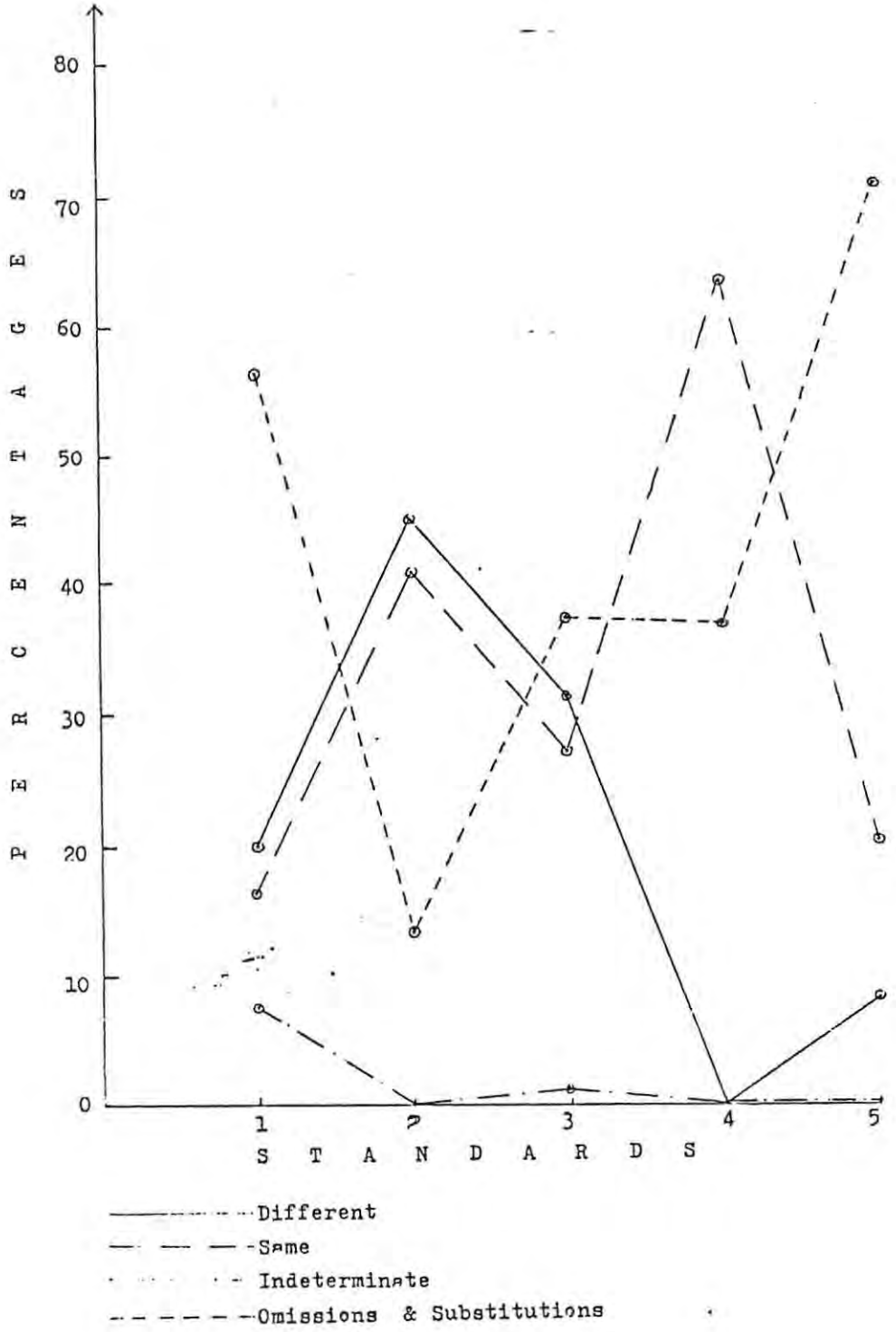
N = 5

TABLE 6.10 suggests specific trends within standards. For Std 1 - 3, there are more miscues with different grammatical function than miscues with similar function, while the pattern is reversed for Stds 4 - 5. The latter appear to have developed a greater sensitivity to grammar - understanding relationships within the sentence - than Stds 1 - 3. The readers in these standards apparently do not make miscues with indeterminate grammatical function, which further confirms the inference.

Across standards, a developmental pattern (though not a straight-line development) is apparent (TABLE 6.11). Std 1 makes fewer miscues with different grammatical function than both Std 2 and 3, possibly because of dependency on the text. From Std 3 to Std 5, there is a dramatic decrease in miscues with different function.

TABLE 6.11

ILLUSTRATION OF GRAMMATICAL FUNCTION OF MISCUES IN AFRIKAANS, EXPRESSED AS PERCENTAGES OF FREQUENCIES IN TABLE 6.10



Dissimilarity in grammatical function does not, however, imply syntactic or semantic unacceptability. The Std 5 reader, for example, reads:

READER: ... ek het gevoel hoe hy oor my linkervoet

tuismaak/...

tuismaak
(Eng. = I felt how he settled across my left foot)
for:
TEXT: ... ek het gevoel hoe hy hom op my linkervoet tuismaak
(Eng. = I felt how he made himself comfortable on my left foot)

The reader's response is fully acceptable semantically, even though the pronoun "hom" (Eng. = "him") plus preposition "op" (Eng. = "on") is replaced by the preposition "oor" (Eng. = "across") only. Such semantic acceptability of grammatically dissimilar miscues suggests language processing and manipulation of meaning at a level higher than the sentence.

The syntactic and semantic categories below will provide more reliable evidence of the value of miscues.

6.1.4.5 Syntactic Acceptability

Since the similarity in grammatical function does not have a regular pattern (FIG 6.11), in this context the null hypothesis is that no differences exist between syntactic acceptability and school standard.

The null hypothesis is rejected; $p > 0,025$ is significant (TABLE 6.12), suggesting a positive relationship between syntactic acceptability and school standard. It can be inferred that sensitivity to grammar increases with advance in standard.

TABLE 6.12/...

TABLE 6.12

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT SYNTACTIC ACCEPTABILITY IS INDEPENDENT OF SCHOOL STANDARD

ACCEPTABILITY	STANDARDS					TOTAL
	1	2	3	4	5	
None	1A 3 (3,25)	2A 3 (2,86)	3A 7 (3,77)	4A 0 (1,43)	5A 0 (1,69)	13
With parts prior to or following Miscue	1B 8 (9,0)	2B 12 (7,92)	3B 11 (10,44)	4B 2 (3,96)	5B 3 (4,68)	36
In the Sentence and the Passage	1C 14 (12,75)	2C 7 (11,22)	3C 11 (14,79)	4C 9 (5,61)	5C 10 (6,63)	51
Totals	25	22	29	11	13	100

$X^2 = 16,13$

d.f. = 8

$p > 0,025$

The percentage miscues with syntactic acceptability/unacceptability (TABLE 6.13) support the inference that sensitivity to grammar increases with advance in standard.

TABLE 6.13

PERCENTAGE SYNTACTIC ACCEPTABILITY OF MISCUES LISTED IN TABLE 6.12

ACCEPTABILITY	STANDARDS				
	1	2	3	4	5
None	12,0	13,6	24,2	-	-
With Parts of Sentence	32,0	54,6	37,9	18,2	23,1
In Sentence & Passage	56,0	31,8	37,9	81,8	76,9
Total	100,0	100,0	100,0	100,0	100,0
N = 5					

TABLE 6,14/...

TABLE 6.14

ILLUSTRATION OF SYNTACTIC ACCEPTABILITY OF MISCUES IN AFRIKAANS, EXPRESSED AS PERCENTAGES OF FREQUENCIES IN TABLE 6.13

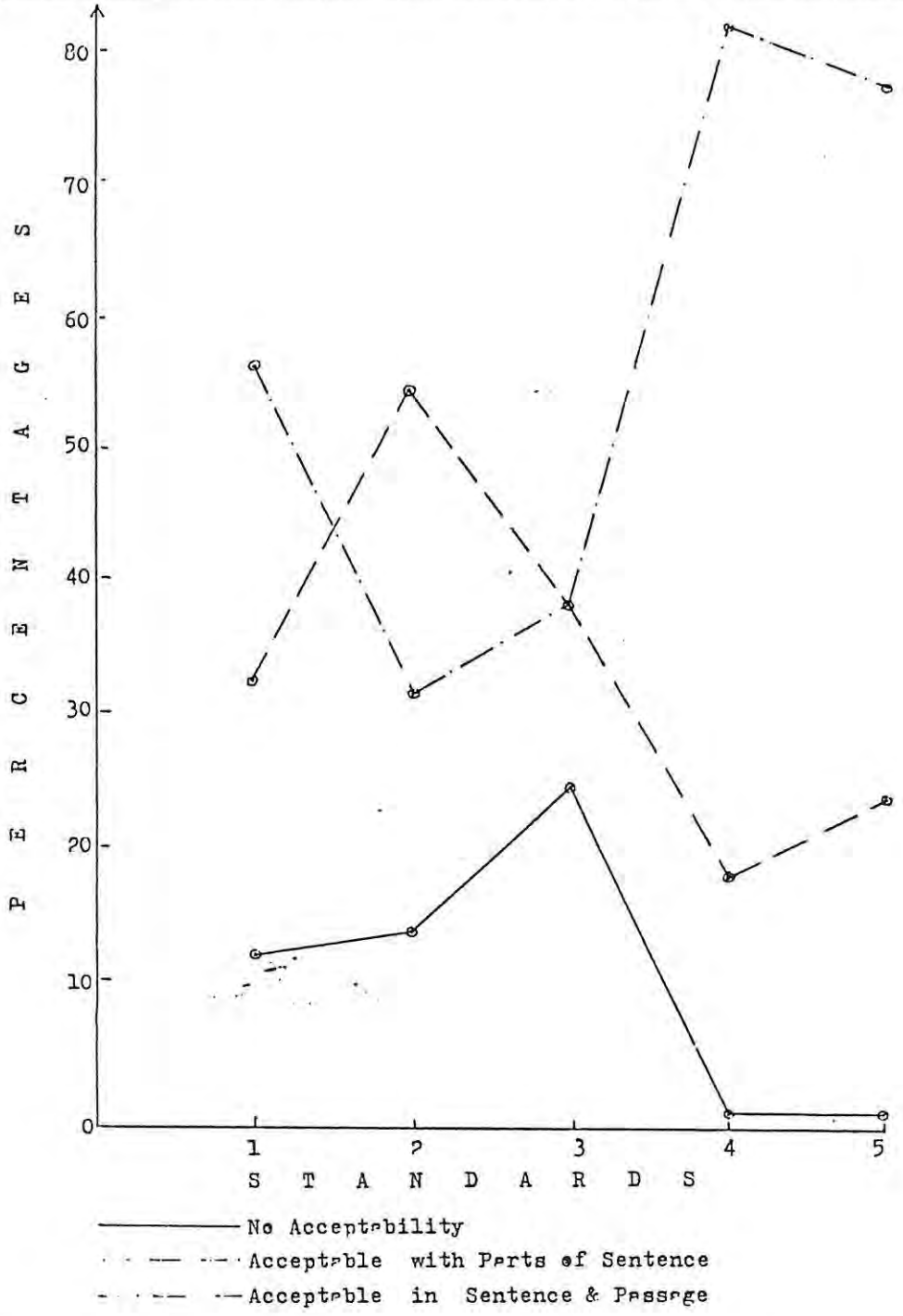


TABLE 6.14 is a diagrammatic representation of developmental trends. What has emerged is that miscues with no syntactic acceptability are at the lowest scale. Std 1 -2 readers are more or less at the same level. Readers at this

stage are/...

stage are apparently still at the word attack level, and grammaticallity is secondary.

The Std 3 reader has the highest percentage miscues with no syntactic acceptability, suggesting that, like the Std 1 - 2 readers, the Std 3 reader is also letter/word dependent. This level apparently also represents the cut-off or transition level, and integration of word recognition and manipulation of meaning result in increased unacceptability of miscues.

The Std 4 - 5 readers do not have miscues with no syntactic acceptability, suggesting that readers are grammatically competent at the end of Std 3.

Miscues which are acceptable with parts prior to or following the miscue establish trends in processing lengths of texts; readers who make miscues at these levels concentrate on processing phrases and clauses instead of sentences and the text as a whole. TABLE 6.14 indicates a tendency towards a decrease in processing of parts of sentences with advance in standard from Std 2 onwards. Std 1 readers, probably because they operate intuitively, have a much lower percentage miscues which are unacceptable with parts of sentences than both Stds 2 and 3 readers.

The developmental pattern for miscues with syntactic acceptability at the level of the sentence and the text suggests increased sensitivity to grammar with advance in standard.

The Std 2 reader produced not only the highest percentage miscues with acceptability at the phrase and clause level, but also the percentage with acceptability at the level of the sentence and the passage, while the Std 3 reader appears to pay equal attention to processing parts of the sentence and the text, once again suggesting that this standard represents the transition stage from word attack skills to text processing (TABLE 6.13 & 6.14).

6.1.4.6/...

6.1.4.6 Syntactic Change

The category above has not made any distinction between miscues which produce major syntactic changes, and those which produce minor changes. The Coding Guide (Appendix V) sets out the criteria for classification of syntactic change as either minor or major.

The question which arises is whether the extent of syntactic change is related to school standard. The null hypothesis is rejected since the value of X^2 is highly significant ($p > 0,005$). The conclusion is that syntactic change is strongly related to school standard.

TABLE 6.15

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT SYNTACTIC CHANGE IS INDEPENDENT OF SCHOOL STANDARD

CHANGE	STANDARDS					TOTAL
	1	2	3	4	5	
Minor/Little	1A 14 (12,25)	2A 7 (10,78)	3A 9 (14,21)	4A 9 (5,39)	5A 10 (6,37)	49
Major	1B 11 (12,75)	2B 15 (11,22)	3B 20 (14,79)	4B 2 (5,61)	5B 3 (6,63)	51
Total	25	22	29	11	13	100

$X^2 = 15,64$

d.f. = 4

$p > 0,005$

The percentage miscues with major and minor syntactic change (TABLE 6.16) is plotted on a graph (TABLE 6.17) to illustrate developmental trends.

TABLE 6.16/...

TABLE 6.16

PERCENTAGE SYNTACTIC CHANGE OF MISCUES IN AFRIKAANS, CALCULATED FROM FREQUENCIES IN TABLE 6.15

CHANGE	STANDARDS				
	1	2	3	4	5
Minor	56,0	31,8	31,0	81,8	76,9
Major	44,0	68,2	69,0	18,2	23,1
Total	100,0	100,0	100,0	100,0	100,0
N = 5					

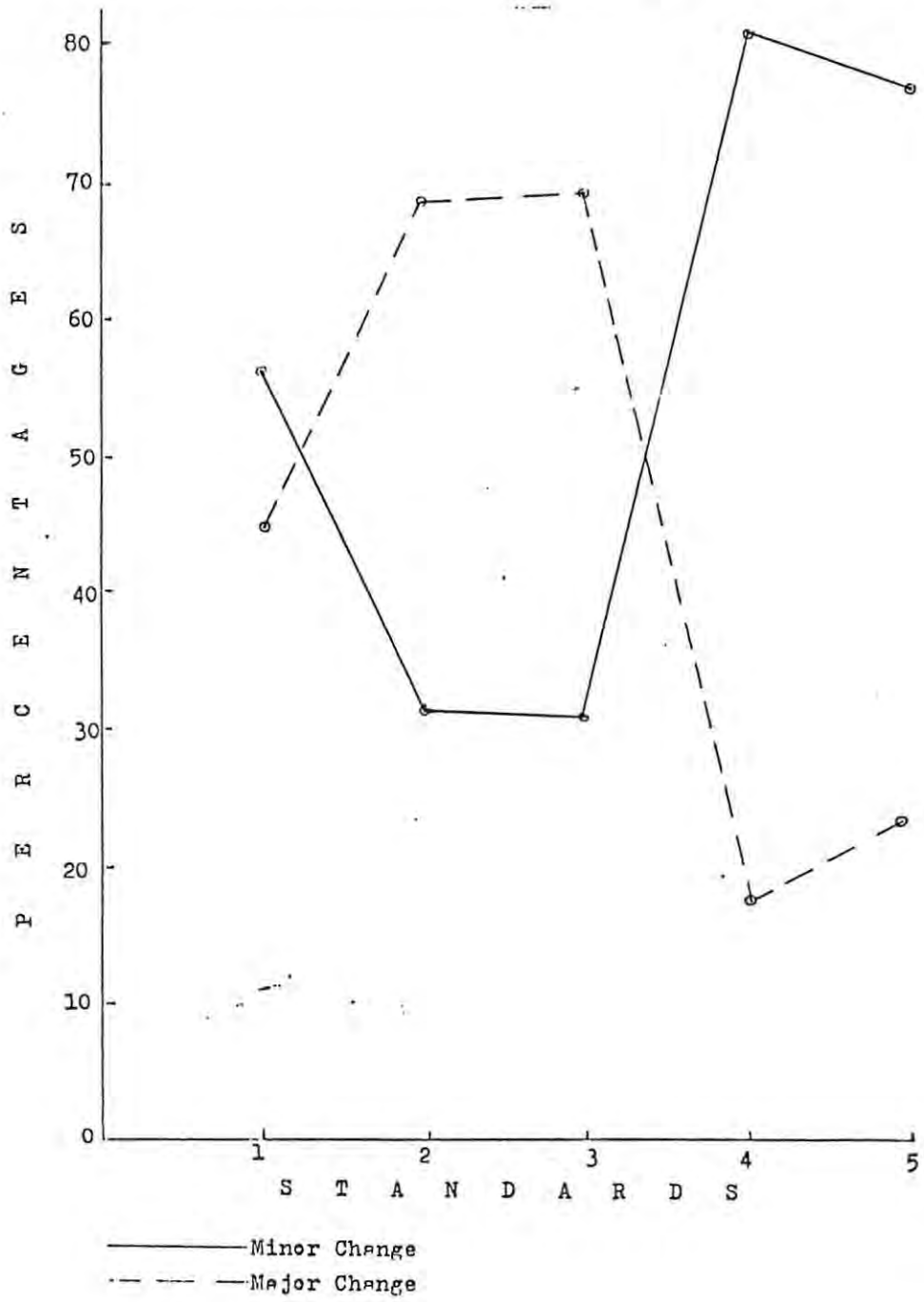
The data obtained from the Std 1 reader once again does not suggest any relationship to the rest of the readers. The pattern for this standard closely copies that for syntactic acceptability (TABLE 6.13), an indication that for this standard at least, minor and major syntactic change correspond with miscues that are acceptable with parts of the sentence and the passage respectively.

The horizontal pattern established for Stds 2 - 3 readers for both minor and major syntactic change suggests little development takes place during these stages for reasons already mentioned: readers progress from a concentration on word recognition to text processing. Std 3 seems to represent, for this category and the former, a cut-off and/or transition stage. Note the dramatic increase and decrease in miscues with major and minor miscues respectively from Std 3 to Std 5. This suggests that sensitivity to grammar is closely related to standard. With advance in standard, readers make fewer miscues with major syntactic change.

TABLE 6.17/...

TABLE 6.17

ILLUSTRATION OF SYNTACTIC CHANGE RESULTING FROM MISCUES IN AFRIKAANS, EXPRESSED AS PERCENTAGES OF FREQUENCIES IN TABLE 6.16



6.1.47 Semantic Acceptability

Syntactic acceptability and change need not necessarily imply semantic acceptability. However, sensitivity to grammar does suggest access to deep structure of the language which constitutes meaning. This category attempts to establish whether a relationship exists between the semantic acceptability of

miscues and/...

miscues and school standard.

TABLE 6.18

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT SEMANTIC ACCEPTABILITY IS INDEPENDENT OF SCHOOL STANDARD

ACCEPTABILITY	STANDARD					TOTAL
	1	2	3	4	5	
None	4 (3,75)	3 (3,3)	7 (4,35)	0 (1,65)	1 (1,95)	15
With Parts of Sentence	8 (8,25)	8 (7,26)	10 (9,57)	3 (3,63)	4 (4,29)	33
In Sentence and Passage	13 (13,0)	11 (11,44)	12 (15,08)	8 (5,72)	8 (6,76)	52
Total	25	22	29	11	13	100

$X^2 = 5,78$

d.f. = 8

$p > 0,500$

The null hypothesis is retained; the value of X^2 is not significant ($p > 0,500$) (TABLE 6.18), suggesting that increase in miscues with semantic acceptability is not related to advance in school standard - acceptability with parts of the sentence shows little difference, while the other two subcategories show great fluctuations (TABLES 6.19 & 6.20)

What is immediately evident from the data in TABLE 6.19 is that most of the miscues made by all the groups have acceptability at the level of the sentence and the passage, with miscues with no acceptability the least. This trend suggests that all the readers attempt to make sense of what they are reading.

TABLE 6.19

TABLE 6.19

PERCENTAGE SEMANTIC ACCEPTABILITY OF MISCUES
CALCULATED FROM FREQUENCIES (TABLE 6.18) FROM R.M.I (APP. VI)

ACCEPTABILITY	STANDARD				
	1	2	3	4	5
None	16,0	13,6	24,1	-	7,7
With Parts of Sentence	32,0	36,4	34,5	27,3	30,8
In Sentence and Passage	52,0	50,0	41,4	72,7	61,5
Total	100,0	100,0	100,0	100,0	100,0
N = 5					

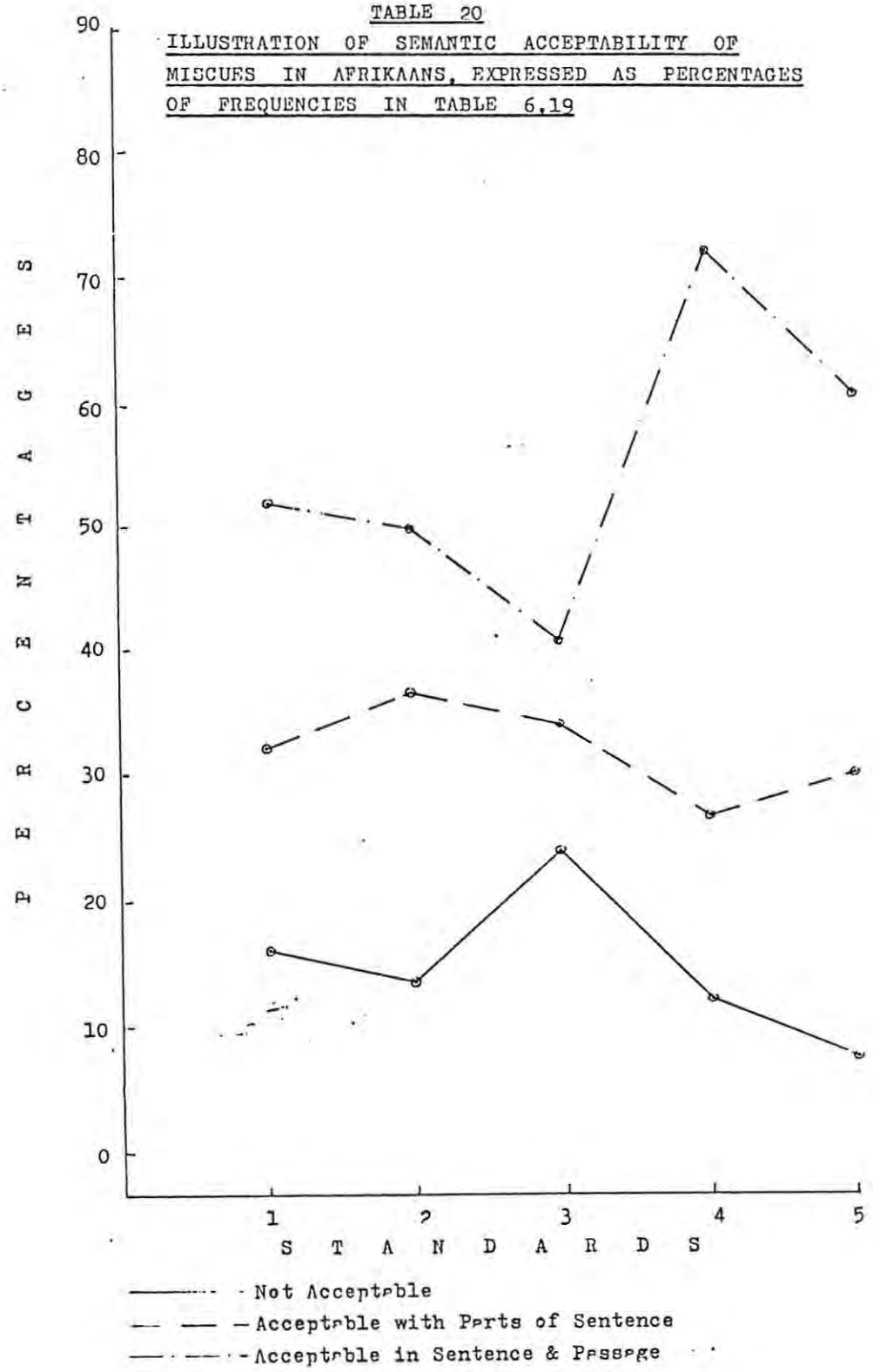
The graph (TABLE 6.20) indicates that miscues with no semantic acceptability decrease with advance in standard. The roughly linear pattern is interrupted by the higher incidence of non-acceptability of miscues made by the Std 3 reader, a pattern which seems to recur in all the categories, and closely resembles that for syntactic acceptability (TABLE 6.14). The inference is that semantic acceptability is related to syntactic acceptability.

Miscues with acceptability with parts of sentences show little variation, ranging between 27,3 % and 36,4 %. This suggests that all readers sample parts of sentences - phrases and clauses - more or less to the same extent. No developmental pattern emerges, probably because all readers, when reading aloud, concentrate on constituent structures since phraseology is an important aspect of reading instruction. The pattern for this category differs from that established for syntactic acceptability (TABLE 6.14), suggesting that, with the exception of Std 3, some miscues with no syntactic acceptability do have semantic acceptability.

TABLE 20 /...

TABLE 20

ILLUSTRATION OF SEMANTIC ACCEPTABILITY OF MISCUES IN AFRIKAANS, EXPRESSED AS PERCENTAGES OF FREQUENCIES IN TABLE 6.19



Miscues with semantic acceptability at the level of the sentence and the passage show fluctuations. There is a steady decrease from Std 1 to Std 3, once again suggesting

That continued/...

that continued instruction in, and emphasis on, word attack skills in the lower standards has a negative influence on reading comprehension. Std 3 again establishes itself as a cut-off level; TABLE 6.20 shows the gap between the three sub-categories is smallest for this group. Std 4 shows a sharp increase in miscues with acceptability at the level of the sentence and the passage, suggesting that readers at this level utilize higher-order skills; there is a transition from mechanical skills to cognitive operations. The decrease from Std 4 to Std 5 would seem to reject this hypothesis, but could be explained as a stabilization after the dramatic increase in the previous standard. The miscue involved is the result of anticipation: the reader makes the wrong hypothesis, viz. she substitutes one character with another (Appendix VII. A5, line 18, sentence number 10, miscue number 4).

6.1.4.8 Semantic Change

Each miscue is classified as having either little/minor or major semantic change. The criteria applied for classification are outlined in Appendix V. This category attempts to establish whether the extent of semantic change brought about by the miscues is related to school standard.

The null hypothesis is accepted since X^2 is not significant ($p > 0,50$) (TABLE 6.21). This suggests there is no relationship between the extent of semantic change and school standard.

TABLE 6.21

TABLE 6.21

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT SEMANTIC CHANGE OF MISCUES IS INDEPENDENT OF SCHOOL STANDARD

	STANDARD					TOTAL
	1	2	3	4	5	
Minor/Little	11 (10,75)	9 (9,46)	9 (12,47)	8 (4,73)	6 (5,59)	43
Major	2 (2,75)	3 (2,42)	3 (3,19)	1 (1,21)	2 (1,43)	11
Unrelated	12 (11,5)	10 (10,12)	17 (13,34)	2 (5,06)	5 (5,98)	46
Totals	25	22	29	11	13	100

X^2 = 6,93

d.f. = 8

p > 0,500

TABLE 6.22

PERCENTAGE SEMANTIC CHANGE

CALCULATED FROM FREQUENCIES (TABLE 6.21) FROM R.M.I. (APP. VI)

SEMANTIC CHANGE	STANDARD				
	1	2	3	4	5
Minor/Little	44,0	40,9	31,0	72,7	46,2
Major	8,0	13,6	10,3	9,1	15,4
Unrelated	48,0	45,5	58,6	18,2	38,5
Total	100,0	100,0	100,0	100,0	100,0
N = 5					

6.1.4.9 Correction Strategies

All readers make miscues through sampling graphic, syntactic and semantic clues (6.1.4.1 - 6.1.4.8). A study of correction strategies will determine whether correction strategies are related to school standard. The null hypothesis is rejected. The significance level (p> 0,005) is high and points to a positive relationship between correction of miscues and

school /...

school standard (TABLE 6.23).

TABLE 6.23

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT CORRECTION STRATEGIES OF READERS ARE INDEPENDENT OF SCHOOL STANDARD

CORRECTION	STANDARD					TOTAL
	1	2	3	4	5	
None	18	9	15	5	5	52
Yes	6	8	14	6	8	42
Unsuccessful Attempts	1	5	-	-	-	6
Totals	25	22	29	11	13	100
N = 5						

X^2 = 20,37
d.f. = 8
p 0,005

TABLES 6.24 and 6.25 indicate specific developmental patterns. The percentage unsuccessful attempts at correction increases from Std 1 (4%) to Std 2 (22,7%), possibly because of: (1) increased letter/word dependency; (2) increased rate of anticipation resulting in obvious miscues; (3) involuntary regression because of uncertainty; and (4) the transition from recognition to meaning-centredness. Std 3 - 5 readers do not make any unsuccessful attempts at correction, suggesting that the spelling system is completely mastered by the end of Std 2.

TABLE 6.24

PERCENTAGE CORRECTIONS OF MISCUES CALCULATED FROM FREQUENCIES (TABLE 6.23) FROM R.M.I. (APP.VI)

CORRECTION	STANDARD				
	1	2	3	4	5
None	72,0	40,9	51,9	45,5	38,5
Successful	24,0	36,4	48,3	54,5	61,5
Unscuccessful Attempts	4,0	22,7	-	-	-
Total	100,0	100,0	100,0	100,0	100,0
N = 5					

There is/...

There is a specific developmental trend for successful attempts at correction (TABLE 6.25). There is a roughly linear pattern which indicates regular, sustained increase from one standard to the next - 24% in Std 1 to 61,5% in Std 5. This suggests increased awareness of syntactic and semantic relationships, and a more reliable check on faulty hypothesis.

Though no straight-line developmental pattern is established for non-correction of miscues, there is a decrease in uncorrected miscues from Std 1 (72,0%) to Std 5 (38,5%), suggesting that, with advance in standard, readers only correct those miscues which interfere with intelligibility. The low percentage for Std 2 - the reader may simply be ignoring miscues, possibly because: (1) she is not aware of them; and (2) she sacrifices correction opportunities for the sake of fluency.

TABLE 6.25 indicates that readers in the higher standards are more likely to correct semantically unacceptable miscues. The 100% correction by the Std 4 - 5 readers suggests that Std 3 is the cut-off level in meaning-centred reading.

TABLE 6.25

PERCENTAGE CORRECTION OF SEMANTICALLY UNACCEPTABLE MISCUES CALCULATED FROM FREQUENCIES IN R.M.I. (APP. VI)

	STANDARD				
	1	2	3	4	5
Corrected Miscues	25,8	33,3	57,1	100,0	100,0
	N = 5				

The percentage correction of semantically acceptable miscues (TABLE 6.26) does not show a similar pattern. Efficient readers -- readers who read for meaning -- do not find it necessary to correct semantically acceptable miscues, therefore no developmental trends will be evident. Correction of these miscues appear to be the same for all readers.

TABLE 6.26 /...

TABLE 6.26

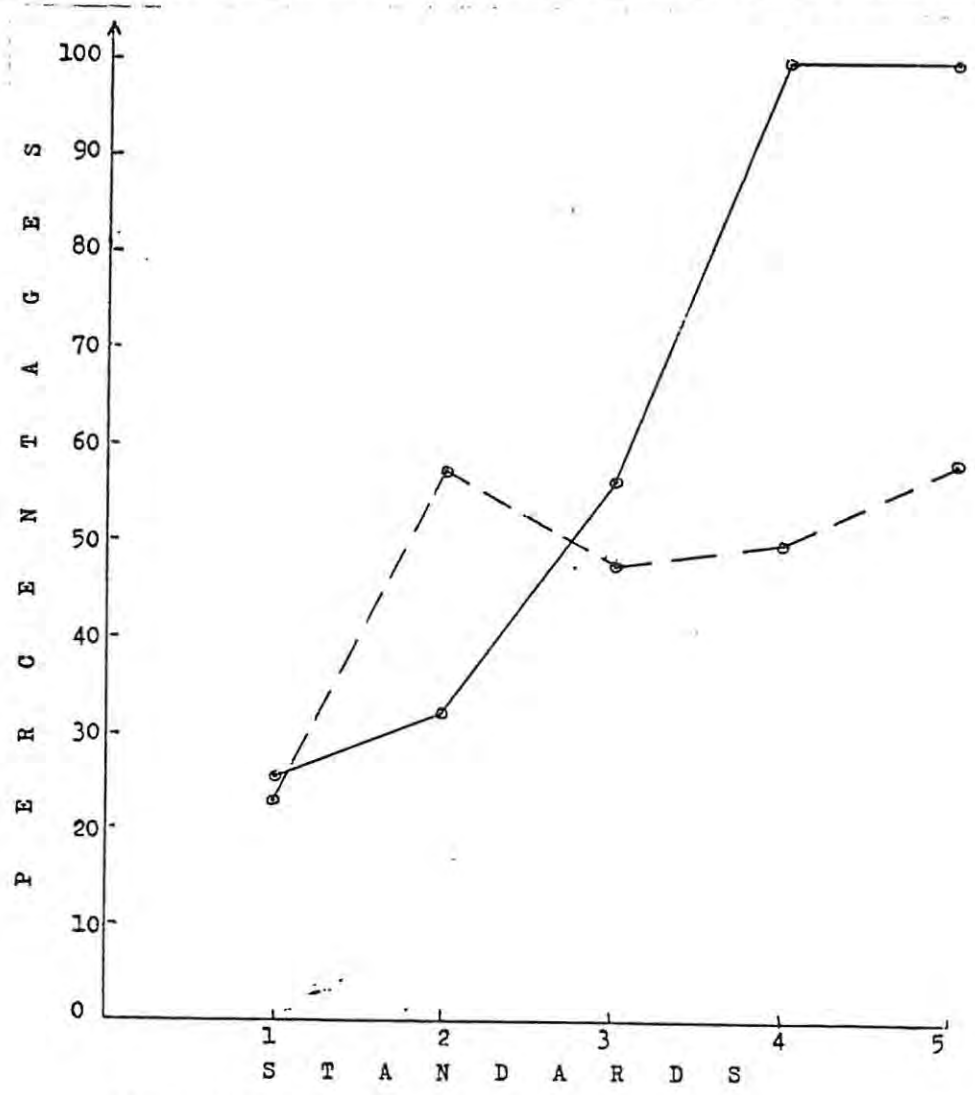
PERCENTAGE CORRECTION OF SEMANTICALLY ACCEPTABLE MISCUES CALCULATED FROM FREQUENCIES IN THE R.M.I. (APP VI)

	STANDARD				
	1	2	3	4	5
Corrected Miscues	23,1	57,9	47,6	50,0	58,3
N = 5					

TABLE 6.27 illustrates the trends indicated by TABLES 6.25 and 6.26.

TABLE 6.27

ILLUSTRATION OF TRENDS ESTABLISHED FOR CORRECTIONS OF SEMANTICALLY ACCEPTABLE AND UNACCEPTABLE MISCUES IN AFRIKAANS. CALCULATIONS FROM FREQUENCIES IN TABLES 6.25 AND 6.26



6.1.4.10/...

6.1.4.10 Dialect

Of significance to the psycholinguistic theory is the occurrence of miscues which result from dialectal sources. All readers make dialect-induced miscues which supports yet another aspect of the psycholinguistic theory of reading: readers bring their background and language knowledge to the reading.

Dialect miscues involve ideolects, supercorrections, and allologs. An example of an ideolect is "spelletjie" for "speletjie". This is a logical derivation from the noun "spel", since diminutives are normally derived from nouns and not from verbs -- the diminutive "speletjie" is derived from the verb "speel".

The following is an example of supercorrection:
Reader: Ø
Text: Dis 'n somerdag in die Laeveld van die Transvaal.

The readers' response is in fact, a natural one. The reader lives in the Cape Province ("in die Kaapprovinsie"), therefore the name of the province should, in the reader's opinion, be preceded by the definite article. (Natal is an exception, and it would have been interesting to see if the reader would have inserted the article for this province as well). The article is optional for the name of this province, but it is interesting to note that, with the exception of the Std 4 reader, all the readers inserted the article. Some miscues are common, as in the case of the insertion of "soos" in line 10:

Reader: soos
Text: ... en dit is sover sy kom.

The word "soos" marks a simile or comparison. In the text it is omitted, but the readers recognised it as a comparison and supplied the missing link.

An example/...

An example of an allolog or alternate form of the word is supplied by the Std 1 reader (miscue number 11, line 30):

Reader: vervoer
Text: ... en geeneen n spier nie.

"Geeneen" (Eng = "no one") is the equivalent/synonym of "geen mens" (Eng = "nobody"). "Een" (Eng = "one") is a substitute for "mens (Eng = "person"), and if taken as a modifier, it marks a noun which is omitted / to be inferred. The reader has therefore retrieved the deep structure.

All readers therefore bring to their reading, their background, knowledge of their language, and ideas of how it should be spoken or written; their reading is an active process.

6.1.4.11 Retelling

The relatively low percentage miscues with semantic acceptability (TABLE 6.19), and the progressive increase in correction of semantically unacceptable miscues (TABLE 6.23) give the impression that readers have a high level of comprehension. Readers could, according to Burke (1969), "appear to operate with proficient reading skill when gaining only minimal or superficial meaning." Retelling of the story will ascertain how well the reader understands, taking into account the following skills.:

(1) recognition of theme, viz. whether men have more courage than women;
(2) understanding topic, i.e. recognizing the main elements, viz. - the debate on who has more courage;
- actions of Mrs Cronje; and
- the part played by Captain Sadie;
(3) understanding propositional development, ie. ordering of events set out under (2) and discovering links between them;
(4) locating judgements explicitly made in the text, viz. women are braver and have more initiative; and

(5) making/...

(5) making judgements based on events, viz. men are not braver than women, and vice versa.

St 1 Reader (APPENDIX VII A.1)

The reader had to be prompted to talk, because he did not know where to start. There seems to be a preoccupation with events rather than theme. The answer to the question aimed at determining this assumption concentrates on WHAT HAPPENED. To the question, "What were they discussing ...?" the reader recalls what women do when frightened -- the reader cannot deal with abstractions such as theme. The reader can, however, infer the meaning of concepts such as bravery which is given as "not to be afraid ...".

The reader at first appears to understand topic and its development. The events are relayed in correct sequence. The reader, however, confuses characters; he refers to Mrs Cronje as Mr Cronje. This can be ascribed to a lapse -- again, it is the event that is most important -- and it can lead to interference with intelligibility.

The reader either ignores the stated judgement, viz. women are braver than men, or has forgotten the text. More plausible is that the reader has his own opinion which is influenced by socially held misconceptions about the courage of women. Events prove that both Captain Sadie and Mrs Cronje show courage and initiative, but the reader makes judgements independent of events. This again confirms the assumption that readers at the Std 1 level rely more on intuition than the text.

Std 1 readers can therefore read with understanding of sequence of events and an ability to infer meanings of unfamiliar words in their mother-tongue, but are not capable of making judgements based on events.

Std 2 Reader (APPENDIX VII A.2)

The Std 2 reader also fails to recognize the theme of

the passage/...

the passage. To the reader, the theme is not the debate on the courage of men and women, but rather how frightened and helpless women are when confronted by danger.

The Std 2 reader also seems to display a preference for events rather than ideas, especially those involving action, viz. Mrs Cronje invited guests, the bell rang, Mrs Cronje told her son to put milk on the stoep, and Captain Sadie ordered the guests to sit still.

The reader, though he relates events in correct sequence, ignores vital information, e.g. the reason why Mrs Cronje told her son to put milk on the stoep. The Std 2 reader therefore does not understand cause and effect relationships. This deficiency has serious implications for comprehension.

The Std 2 reader, like his Std 1 counterpart, seems to rely on intuition and his own opinions when making judgements; he ignores or fails to register the verdict of the text, and insists men are braver than women. Evidence of bravery and resourcefulness of both parties does not influence judgement.

The Std 2 reader becomes more cautious than the Std 1 reader in inferring word meanings; the reader does not venture a guess at the meaning of "klinkklare bewys".

St 3 Reader (APPENDIX VII A.3)

The reader seems to recognize theme, though it is not accurately identified. It is given as the courage of men and the timidity of women, and described in terms of WHAT THEY DO. There is confusion, however, about exactly what men do -- the text does not specify their actions. They are alarmed when an accident occurs. This is repeated in a response to a question on the topic of discussion. The reader fails to recognize that the debate centres around two opposing views, and not on a variation of the same view.

The Std 3/...

The Std 3 reader shows lack of understanding of development of topic; events are not chronologically recalled, e.g. Mrs Cronje feels the snake, asks her son to put milk out on the stoep, and then calls the guests to dinner. This inability to correctly order events has serious implications for learning.

The Std 3 reader is also not restrained by the text; she insists that, according to the text, the men are braver than the women. The insistence is a result of stereotypes widely held in society.

The reader is unable to make judgements based on evidence supplied by the text, even after questioning had elicited that both men and women are brave. This inability to synthesize information and infer meanings not explicitly stated in the text limits understanding.

Std 4 Reader (APPENDIX VII A.4)

The Std 4 reader demonstrates understanding of theme; the reader can cope with abstract concepts, e.g. courage of men and women is recognized as the theme. The reader, however, lacks ability to recognize salience and importance; when asked what the topic/theme of the the passage was, she listed all three topics discussed, viz. courage of men and women, the weather, and a kudu. Readers at this level will have difficulty extracting relevant information. Evidence is provided by the question why snakes are attracted by milk. The reader supplies, in addition to the correct answer, irrelevant information such as, "milk is a dairy product".

The reader also has difficulty with sequence, e.g. the boy puts the milk out on the stoep before Mrs Cronje feels the snake on her foot. The presence of the snake is incidental, and not connected with the placing of the milk. This suggests difficulty with understanding propositional development; events are seen as isolated and the reader fails to recognize

the links/...

the links between them -- the reader displays a lack of understanding cause and effect relationships.

The reader has become more text dependent, and she correctly gives the text verdict on who is the braver. However, the reader cannot make independent judgements based on textual evidence. The reader is unable to make her own judgements even though she has correctly identified the elements which would enable her to make such judgements.

Std 5 Reader (APPENDIX VII A.5)

The reader has a more complete understanding of theme. In the retelling, the reader identifies the theme, suggesting an ability to cope with abstract processes. The reader is also sensitive to salience and importance: only the relevant and most important aspects are given in correct sequence. The establishment of links between ideas displays an understanding of propositional development, and cause and effect relationships.

The reader is text dependent, but cannot synthesize all the existing information to arrive at an independent evaluation.

In addition to insights gained into the nature of the reading process, the retelling offers valuable information on the development of reading skills crucial to effective text processing. The following information has emerged:

(1) Understanding theme is developmentally determined. Std 1 and 2 readers concentrate on events rather than ideas since they are maturationally incapable of understanding abstract concepts. The Std 3 reader is in transition from recording of events to recognition of ideas. This often leads to confusion. The Std 4 reader understands abstract concepts, but is unable to organize ideas in a hierarchy of importance and salience. The Std 5 reader demonstrates an understanding of theme and its important aspects.

(2) Understanding/...

(2) Understanding propositional development is developmental. The Std 1 - 4 readers regard events as isolated, i.e. not related, an indication of lack of understanding of cause and effect relationships. This skill is only mastered in Std 5.

(3) Recording judgements explicitly stated in the text is developmental. Std 1 - 3 readers make their own judgements independent of the text. Societal views - stereotypes - override contradicting evidence. Whereas the Std 1 - 3 readers rely more on intuition, the Std 4 - 5 readers are more text dependent.

(4) All readers in the primary standards are incapable of making judgements based on evidence contained in the text, a deficiency with serious implications for learning.

6.1.4.12 Summary and Evaluation

Miscue analysis and retelling of the story provide the following insights:

- All readers make miscues. Though not conclusive, the MPHW decreases with increasing efficiency;
- The Std 3 level marks the transition stage between "passive" word recognition and "active" reconstruction of the text;
- There is a decrease in dependency on letter and word "processing" with advance in school standard;
- The readers have no problems with the Afrikaans spelling system because Afrikaans is a phonemic language, there is a one-to-one correspondence between sound and symbol;
- Readers in Stds 1 - 2 rely more on innate language competence, whereas the Std 4 - 5 readers rely more on syntactic and semantic cues, and Std 3 marks the transition stage;
- Readers are less likely to make semantically unacceptable miscues as efficiency increases;
- There is a developmental pattern in correction

pattern/...

patterns, i.e. there is a steady increase in the percentage correction of semantically unacceptable miscues from Std 1 upwards;
- Readers, with advance in standard, bring their background and language knowledge, and their own opinions to the text; and
- Development of higher order skills, viz. recognition of theme and development of proposition, and inferring information not specifically stated in the text is maturationally determined.

The significance levels for graphic ($p > 0,100$) and phonemic ($p > 0,250$) categories are not significant. Since reading instruction in schools concentrates on word recognition and oral production skills, these aspects are mastered early in the child's reading. In fact, he comes to school with a 'sound' knowledge of his language, and mastery of the sound-symbol correspondence -- which is a one-to-one correspondence in Afrikaans -- is a mechanical skill which requires mere retention. It is therefore surprising that reading programmes continue to place such a high premium on word attack skills throughout the primary school phase.

The significance levels for grammatical function ($p > 0,005$) and syntactic acceptability ($p > 0,025$) and change ($p > 0,005$) are high, suggesting development through the standards. These categories demand particular attention. This is where exercises in anticipation (cloze and completion -- see 5.3.1) can play an important role.

The significance levels for semantic acceptability and change ($p > 0,500$) is low. Data suggest little development takes place through the standards. Reading programmes should concentrate on thematization, propositional development, inference skills, and evaluation.

6.1.5/...

6.1.5 The English Text: "Hans Christian Andersen" (APPENDIX XIII)

This part of the study aims at determining: (1) what the readers do when they read in English; (2) whether the skills displayed by readers in the different standards suggest any developmental patterns; and (3) whether these skills are related to those demonstrated in reading in Afrikaans, i.e. whether skills present in reading in Afrikaans are transferred to reading in English.

The reading process is observed through a study of miscues. The procedure is similar to that used for analysis of data obtained from the Afrikaans reading (6.1.3). The criteria for the classification of sub-categories is also the same; the outline is given in the Coding Guide (appendix V).

The relationships between miscues and school standard, and performances in Afrikaans and English are determined by means of Chi-Square (X^2) Statistics. (See TABLE 6.4 for calculation). Frequencies are expressed as percentages and graphically illustrated to show developmental trends.

6.1.5.1 Miscues Per Hundred Words (MPHW)

A clear pattern is observable in this category (TABLE 6.28). Std 1 - 3 readers have more or less the same number of miscues (22 - 29), but the frequencies for Std 4 - 5 are smaller. The inference is that miscues decrease with advance in standard.

TABLE 6.28

MISCUES PER HUNDRED WORDS AS CALCULATED FROM DATA TABLED IN R.M.I. (APPENDIX IX)

	STANDARD				
	1	2	3	4	5
M P H W	9,30	9,77	9,53	3,50	4,88

N = 5

The pattern/..

The pattern closely resembles that for reading in Afrikaans (TABLE 6.29). It is not the number of miscues that is of the greatest importance, but the quality. This aspect will be discussed in 6.1.5.2 - 6.1.5.8.

TABLE 6.29

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT THE MPHW IN READING IN AFRIKAANS IS INDEPENDENT OF THAT IN ENGLISH

MPHW	STANDARDS					TOTAL
	1	2	3	4	5	
Afrikaans	25	22	29	11	13	100
English	40	41	42	15	21	159
Total	65	63	71	26	34	259

$X^2 = 0,94$

d.f. = 4

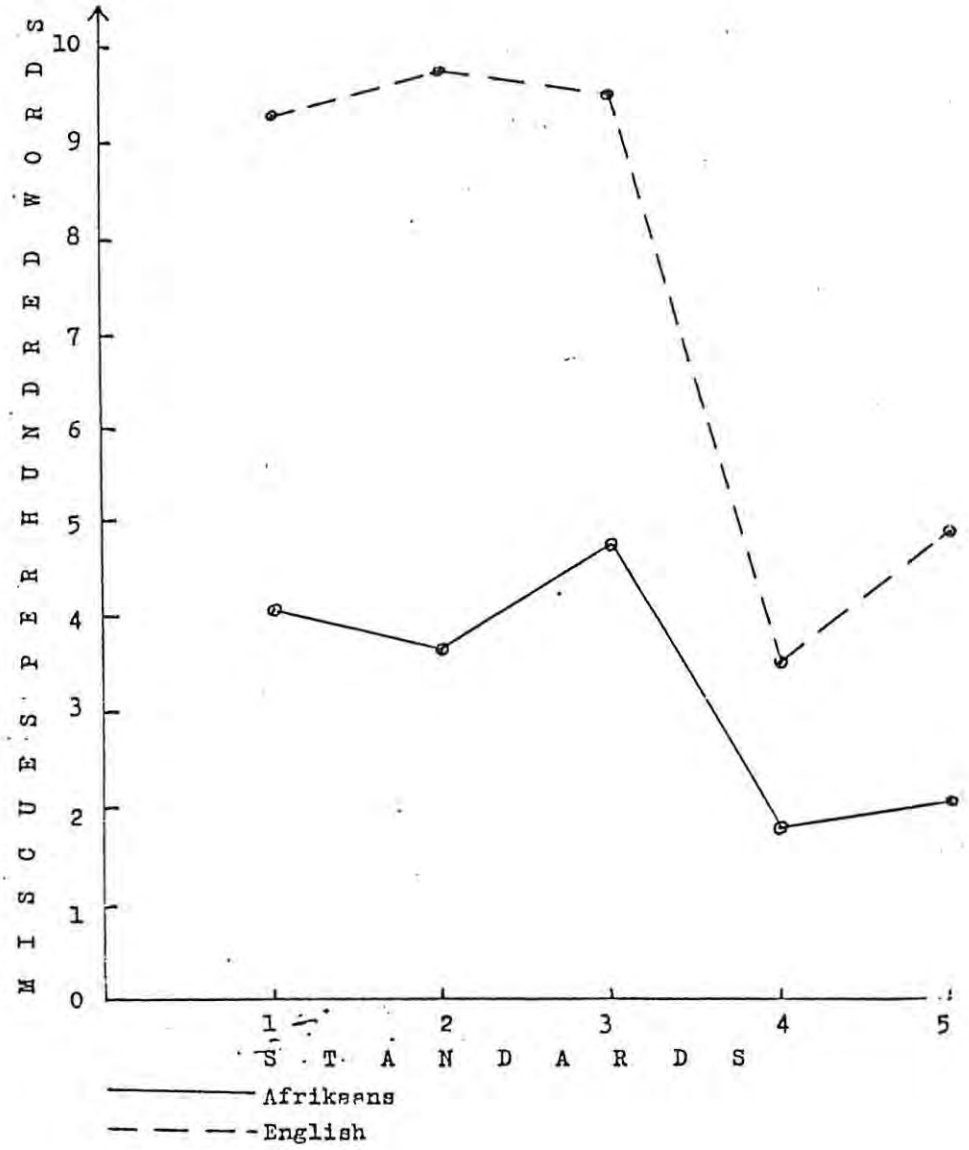
$p > 0,900$

The small X^2 indicates that the null hypothesis is retained. The significance level of 0,900 suggests that the difference in scores is not significant, suggesting a high degree of transfer from Afrikaans to English. It can be inferred, too, that the transfer is highest in Std 4 - 5 as suggested by the narrowing of the gap in TABLE 6.30. The MPHW is therefore not related to language medium, and Std 3 appears to be the cut-off level for English as well as Afrikaans.

TABLE 6.30/...

TABLE 6.30

GRAPHIC ILLUSTRATION OF MISCUES PER HUNDRED WORDS IN AFRIKAANS AND ENGLISH, BASED ON DATA IN TABLES 6.3 AND 6.28



6.1.5.2 Graphic Similarity

The null hypothesis is rejected for this category. The significance level ($p > 0,010$) is significant (TABLE 6.31), suggesting that the graphic similarity of miscues in English is related to school standard.

TABLE 6.31

TABLE 6.31

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT GRAPHIC SIMILARITY OF MISCUES IS INDEPENDENT OF SCHOOL STANDARD

SIMILARITY	STANDARD					TOTAL
	1	2	3	4	5	
None	3	6	2	3	2	16
Low	6	4	6	1	3	20
Moderate	7	12	15	2	3	39
High	21	13	14	3	4	55
Omissions and Substitutions	3	6	5	6	9	29
Total	40	41	42	15	21	159

$X^2 = 31,35$

d.f. = 16

$p > 0,010$

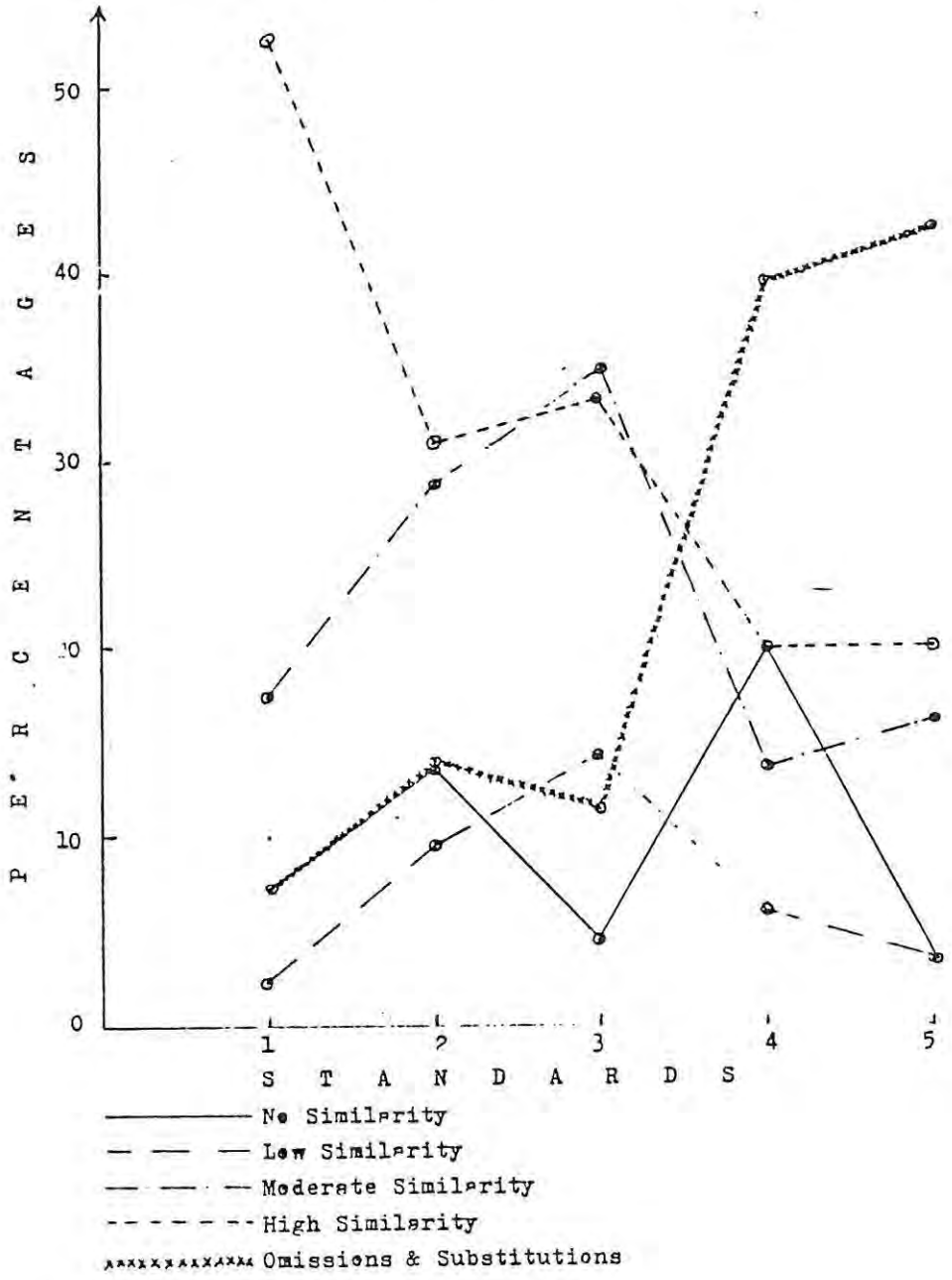
TABLE 6.31 does not indicate any specific pattern for dissimilar miscues from Std 1 (7,5%) to Std 5 (4,0%) (See also TABLE 6.32). The low percentage for all groups suggests readers attempt to approximate sounds represented by the symbols. The low percentage further suggests a high degree of mastery of the English spelling system, an inference that is supported by the equally low percentage of miscues with low graphic similarity.

The percentage of miscues with moderate to high similarity does suggest a developmental pattern, so also the percentage of omissions and substitutions. The percentage of miscues with moderate similarity increases from Std 1 (17,5%) to Std 3 (35,7%), suggesting an increase in word recognition skills. The decrease in the percentage of miscues with high similarity from Std 1 (52,5%) to Std 5 (20,0%) suggests readers become less dependent on feature analysis of letters and words as they advance in standard. The decrease in letter/word dependency is further illustrated by the increase in omissions and substitutions -- 7,5% in Std 1, and 42,8% in Std 5. Readers apparently become more productive as they advance in standard.

TABLE 6.32

TABLE 6.32

GRAPHIC SIMILARITY OF MISCUES EXPRESSED AS PERCENTAGES OF FREQUENCIES IN TABLE 6.31



Miscues with high similarity result from problems with the English grapho-phonemic system, and ESL dialect. An example of the former is given by the Std 1 reader, viz. "staig" for "stage" -- the letter "g" represents both [g] and [d] . The latter is illustrated by "excaped" for "escape", a miscue that is common to all the readers.

Transfer /...

Transfer of skills from Afrikaans to English is determined by comparing the developmental trends in the miscues made in reading in Afrikaans and English. In Afrikaans, the miscues with no similarity show developmental trends (TABLE 6.6), and in English the miscues with high similarity, and omissions and substitutions show developmental trends (TABLE 6.32). This suggests that processing of lexical cues when reading in the two languages develop independent of each other. No transfer takes place because of language deficiencies, a hypothesis defined by Clarke (1980) as the Short-Circuit Hypothesis.

6.1.5.3 Phonemic Similarity

The null hypothesis is rejected. The very high significance level ($p < 0,005$) suggests there is a strong positive relationship between phonemic similarity and advance in standard (TABLE 6.33).

TABLE 6.33

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT PHONEMIC SIMILARITY OF MISCUES IS INDEPENDENT OF SCHOOL STANDARD

SIMILARITY	STANDARD					TOTAL
	1	2	3	4	5	
None	3	7	2	4	2	18
Low	7	9	7	0	4	27
Moderate	11	16	15	3	2	47
High	16	5	13	2	4	40
Omissions & Substitution	3	4	5	6	9	27
Total	40	41	42	15	21	159

$X^2 = 39,97$

d,f. = 16

$p > 0,005$

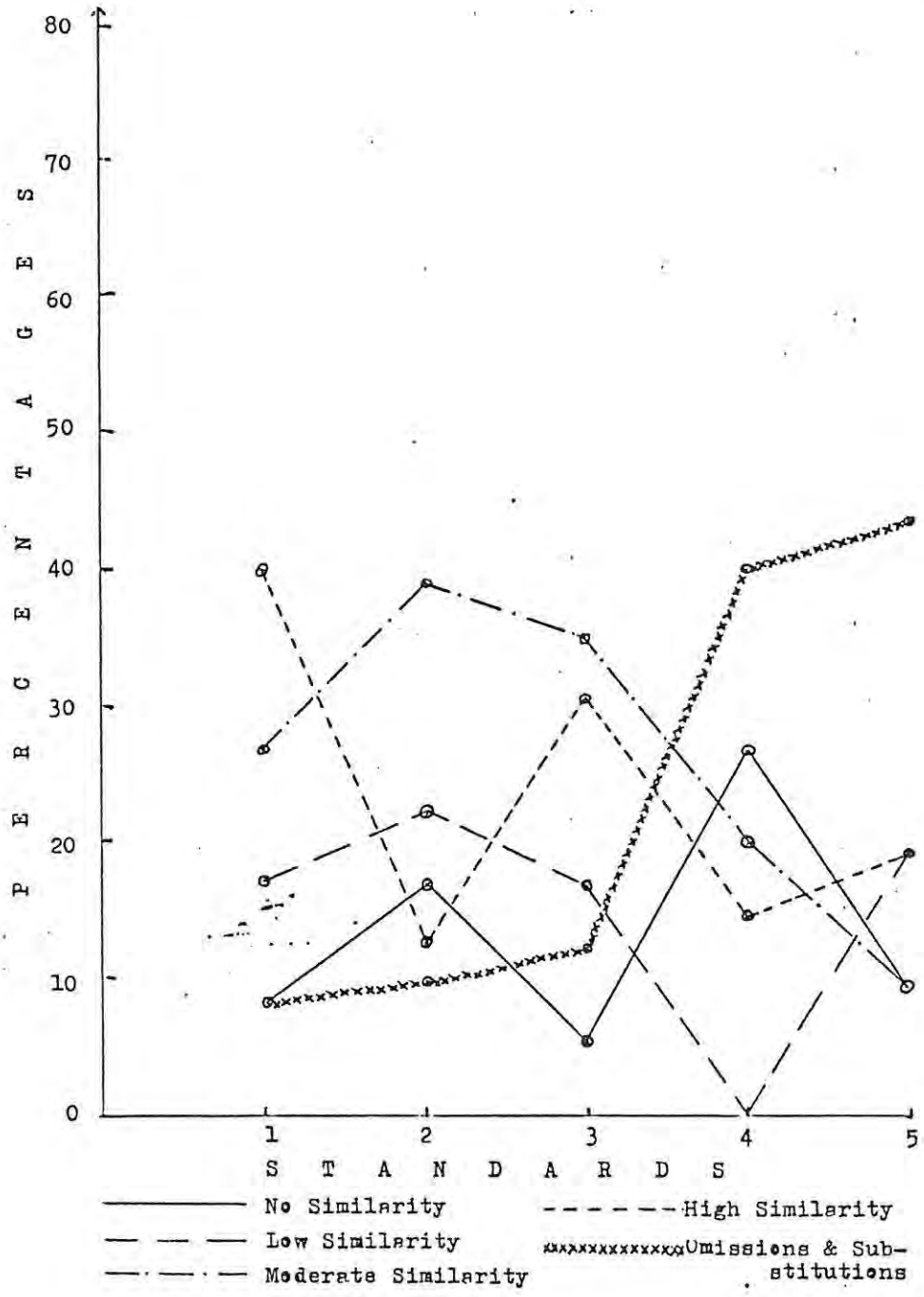
The relationship between phonemic similarity and school standard is established by the fact that readers become progressively more proficient in the English grapho-phonemic system. No such relationship exists for Afrikaans because the reader is already proficient in his mother-tongue.

Since/...

Since this category (phonemic similarity) is closely related to the previous one (graphic similarity), the developmental patterns are also similar (TABLE 6.34). The pattern for dissimilarity (TABLE 6.34) is similar to that established for Afrikaans, but differs for similarity because of the irregular spelling system of English.

TABLE 6.34

GRAPHIC REPRESENTATION OF PHONEMIC SIMILARITY OF MISCUES IN ENGLISH, EXPRESSED AS PERCENTAGES OF FREQUENCIES IN TABLE 6.33



A pattern/...

A pattern does emerge from moderate to high similarities, as well as for omissions and substitutions (TABLE 6.34), and reflects that for graphic similarities. Miscues made by the Std 1 reader are the result of superimposing Afrikaans phonology on the English spelling system, e.g. he reads: "afried" for "afraid". In Std 5, however, the reader has almost mastered the grapho-phonic system. Dissimilarities are the result of ESL influences, e.g. "poor" for "poorer". In "poor" the [r] is silent (<Br E>), but becomes an alveolar continuant in the comparative degree. The reader has not yet mastered the phonological rule: r ⟶ r/v ... v and is inclined to overgeneralize basic phonological rules, viz. r ⟶ ø/v ...

6.1.5.4 Grammatical Function

In this category, reader miscues suggest grammatical competence is related to school standard. The null hypothesis is rejected; the value of X^2 is highly significant at $p > 0,005$ (TABLE 6.35).

TABLE 6.35

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT GRAMMATICAL FUNCTION OF MISCUES IN ENGLISH IS INDEPENDENT OF SCHOOL STANDARD

SIMILARITY						TOTAL
	1	2	3	4	5	
None	10	18	17	2	3	50
Same	25	14	17	7	8	71
Indeterminate	2	5	3	0	1	11
Omissions & Substitution	3	4	5	6	9	27
Total	40	41	42	15	21	159

$X^2 = 31,31$

p.f. = 12

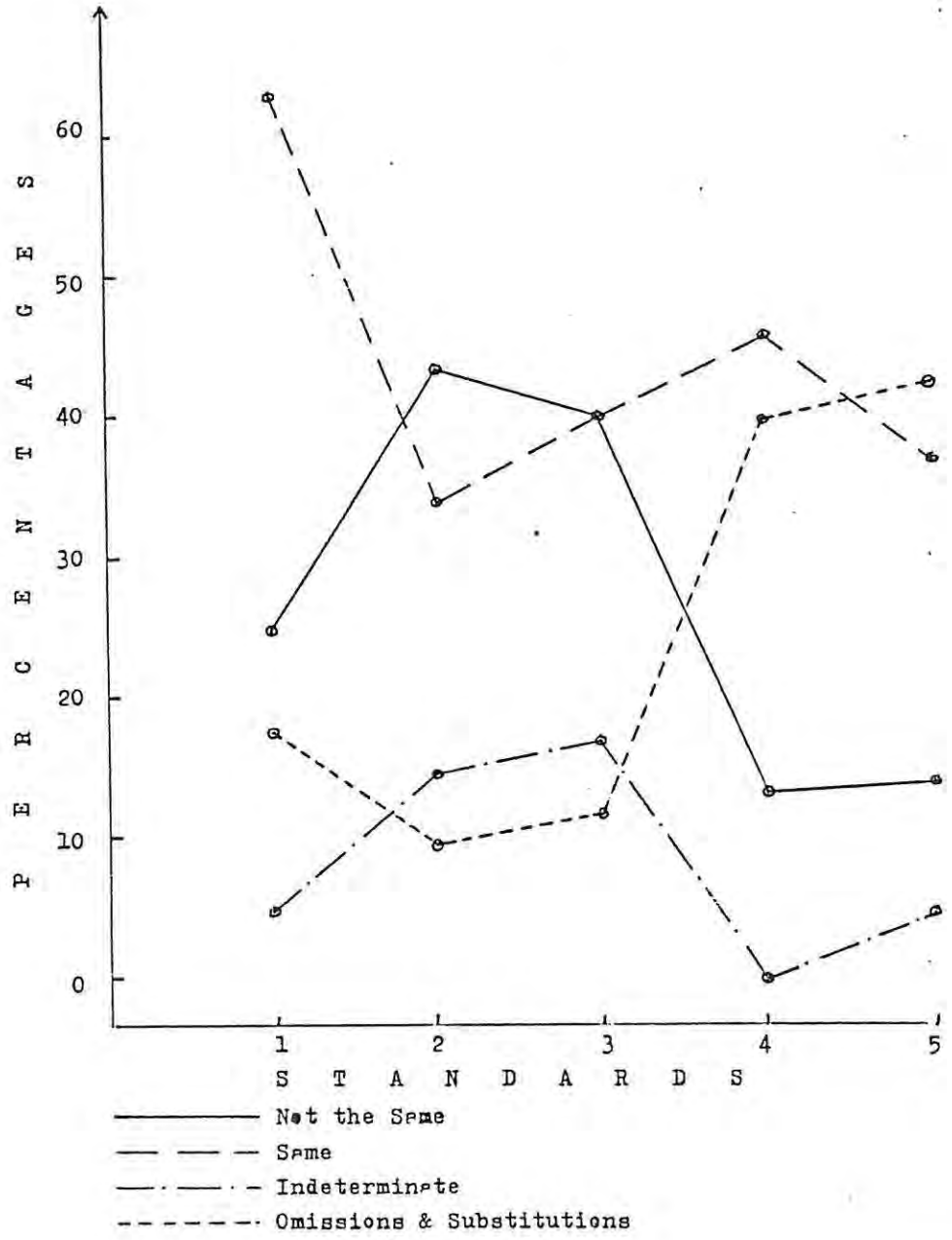
$p > 0,005$

TABLE 6.35 shows/...

TABLE 6.35 shows the miscues with dissimilar grammatical function increase from Std 1 to Std 3, probably because, in the process of mastering the spelling system, readers concentrate on recognition rather than relations between grammatical constituents. Once again, Std 3 establishes itself as the cut-off level as the percentage for Std 4 - 5 decreases sharply, suggesting an increase in sensitivity to grammar from Std 3 upwards.

TABLE 6.36

GRAPHIC REPRESENTATION OF GRAMMATICAL FUNCTION OF MISCUES IN ENGLISH, EXPRESSED AS PERCENTAGES OF FREQUENCIES IN TABLE 6.35



Std 1 has/...

Std 1 has the highest percentage of miscues with similar grammatical function (62,5%), possibly because, of difficulty with the spelling system, readers attempt to get at the meaning of the text independent of lexical cues. As readers become more proficient in word attack skills they make miscues at the level of the sentence, which accounts for the sharp decrease in miscues with similar function in Std 2 (34,1%).

The straight-line increase in similar grammatical function from Std 2 to Std 4 suggests a steady increase in sensitivity to grammar, and the slight drop in miscues for Std 5 suggests the development is not sustained, possibly due to lack of stimulation. Miscues with indeterminate status are fewer, though the pattern is similar, and the pattern for omissions and substitutions is the inverse of that for miscues with dissimilar grammatical function, suggesting that sensitivity to grammar is closely related to productivity.

It must be stressed, however, that similarity dissimilarity in grammatical function does not imply automatic syntactic and semantic acceptability, The Std 1 reader, for example, reads (RMI):

Reader: (9) Anders (10) died
Text: Do not think that Hans Christian Andersen did nothing.

Miscue number 10, "died", has the same grammatical function as "did" in the text. Both are verbs, but the miscue does not have syntactic acceptability.

The significance levels for this category are equally high for both Afrikaans and English ($p > 0,005$) (TABLE 6.9 & 6.35). Chi-Square statistical analysis (TABLE 6.37) suggests there is transfer of sensitivity to grammar from Afrikaans to English. The null hypothesis is retained; the value of X^2 is not significant ($p > 0,025$).

TABLE 6,37/...

TABLE 6.37

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT GRAMMATICAL FUNCTION OF MISCUES IS INDEPENDENT OF LANGUAGE

GRAMM. FUNCTION	SUB-CATEGORIES				TOTAL
	DIFFERENT	SAME	INDETER-MINATE	OMISSION & SUBS	
Afrikaans	25	37	4	34	100
English	50	71	11	27	159
Total	75	108	15	61	259

$X^2 = 10,14$

d.f. = 3

$p > 0,025$

6.1.5.5 Syntactic Acceptability

The null hypothesis is retained; the value of X^2 is not significant ($p > 0,050$) (TABLE 6.38). Increase in miscues with syntactic acceptability is not related to school standard. Readers, when reading in English (the second language), concentrate on the graphophonic system. The data suggest that little or no development in sensitivity to grammar takes place with advance in school standard.

TABLE 6.38

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT SYNTACTIC ACCEPTABILITY IS INDEPENDENT OF SCHOOL STANDARD

ACCEPTABILITY	STANDARD					TOTAL
	1	2	3	4	5	
None	7	9	5	1	0	22
With Part Prior to or following miscue	9	11	13	9	9	51
In the Sentence and the Passage	24	21	24	5	12	86
Total	40	41	42	15	21	159

$X^2 = 13,4$

d.f. = 8

$p > 0,050$

TABLE 6,39

TABLE 6.39 indicates that the Std 1 reader has a greater sense of grammar than the rest, possibly because they are less letter/word dependent -- not because of proficiency, but because they are aware of their deficiency in recognition skills. There appears to be an increase in syntactic acceptability at the phrase and clause level, although the increase does not represent a straight-line development. The high percentage for Std 4 is oof-set by the low percentage miscues that are acceptable at the level of the sentence and the passage. A similar pattern (developmental) is established for miscues with no syntactic acceptability; there is a decrease in miscues with advance in standard. The Std 5 reader, it appears, does not make any miscues that are not acceptable at all. For a graphic representation of developmental patterns, see TABLE 6.39 below.

TABLE 6.39

GRAPHIC REPRESENTATION OF SYNTACTIC ACCEPTABILITY OF MISCUES IN ENGLISH, EXPRESSED AS PERCENTAGES OF FREQUENCIES IN TABLE 6.38

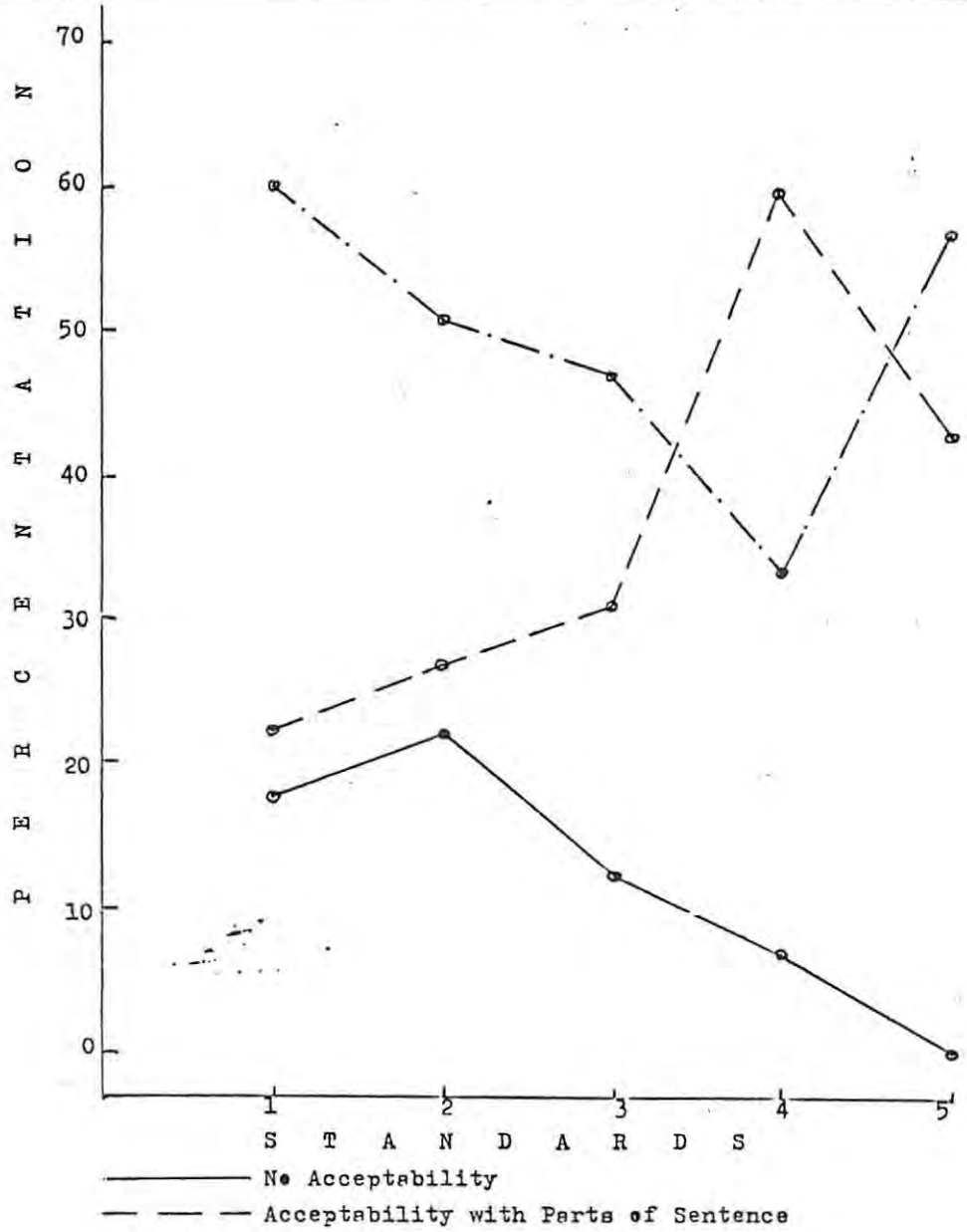


TABLE 6.40

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT SYNTACTIC ACCEPTABILITY OF MISCUES IS INDEPENDENT OF LANGUAGE

ACCEPTABILITY	SUB- CATEGORIES			TOTAL
	NONE	WITH PARTS OF SENTENCE	IN SENTENCE AND PASSAGE	
Afrikaans	13	36	51	100
English	22	51	86	159
Total	35	87	137	259

$X^2 = 0,3$

d.f. = 2

$p > 0,900$

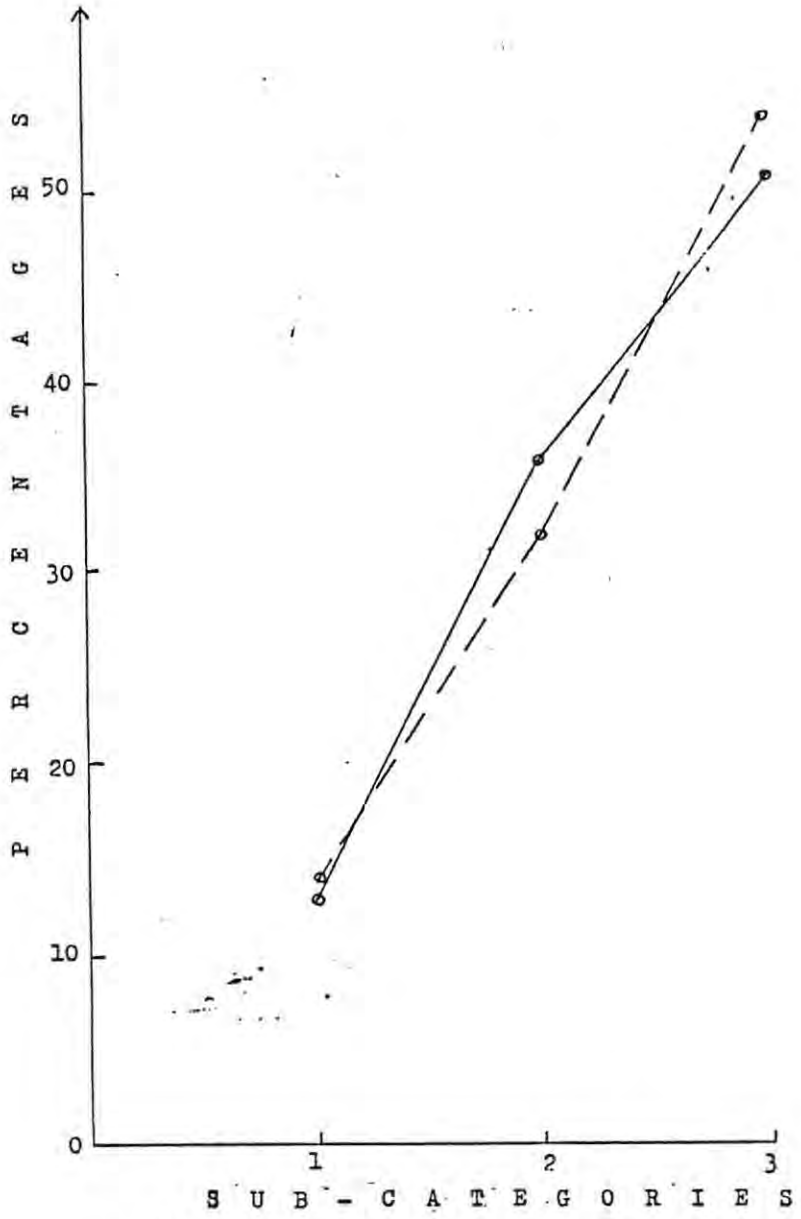
TABLE 6.40 indicates that the syntactic acceptability of miscues in English does not deviate a great deal from that in Afrikaans. The significance level of 0,900 indicates very little significance, suggesting considerable transfer of this particular skill. It can therefore be inferred that sensitivity to grammar is not related to reading in the first and second language in the primary school (see also TABLE 6.41).

Both TABLE 6.40 and 6.41 indicate that, for both languages, there is greater processing of language at the level of the sentence and the passage, than at the level of the phrase and the clause, with unacceptable miscues at the lowest end of the scale.

TABLE 6.41/...

TABLE 6.41

GRAPHIC ILLUSTRATION OF SYNTACTIC ACCEPTABILITY OF MISCUES IN AFRIKAANS AND ENGLISH, EXPRESSED IN PERCENTAGES OF FREQUENCIES IN TABLE 6.40



6.1.5.6 Syntactic Change

There is no significant difference in the syntactic acceptability of miscues across standards (TABLE 6.38). The hypothesis is that no relationship exists between the

syntactic/...

syntactic change brought about by the miscues, and school standard. The null hypothesis is retained; the significance level ($p > 0,250$) is low (TABLE 6.42).

TABLE 6.42

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT SYNTACTIC CHANGE IN ENGLISH, RESULTING FROM MISCUES IS INDEPENDENT OF SCHOOL STANDARD

CHANGE	STANDARDS					TOTAL
	1	2	3	4	5	
Minor/Little	24	19	22	5	12	82
Major	16	22	20	10	9	77
Total	49	41	42	15	21	159

$X^2 = 5,0$

d.f. = 4

$p > 0,250$

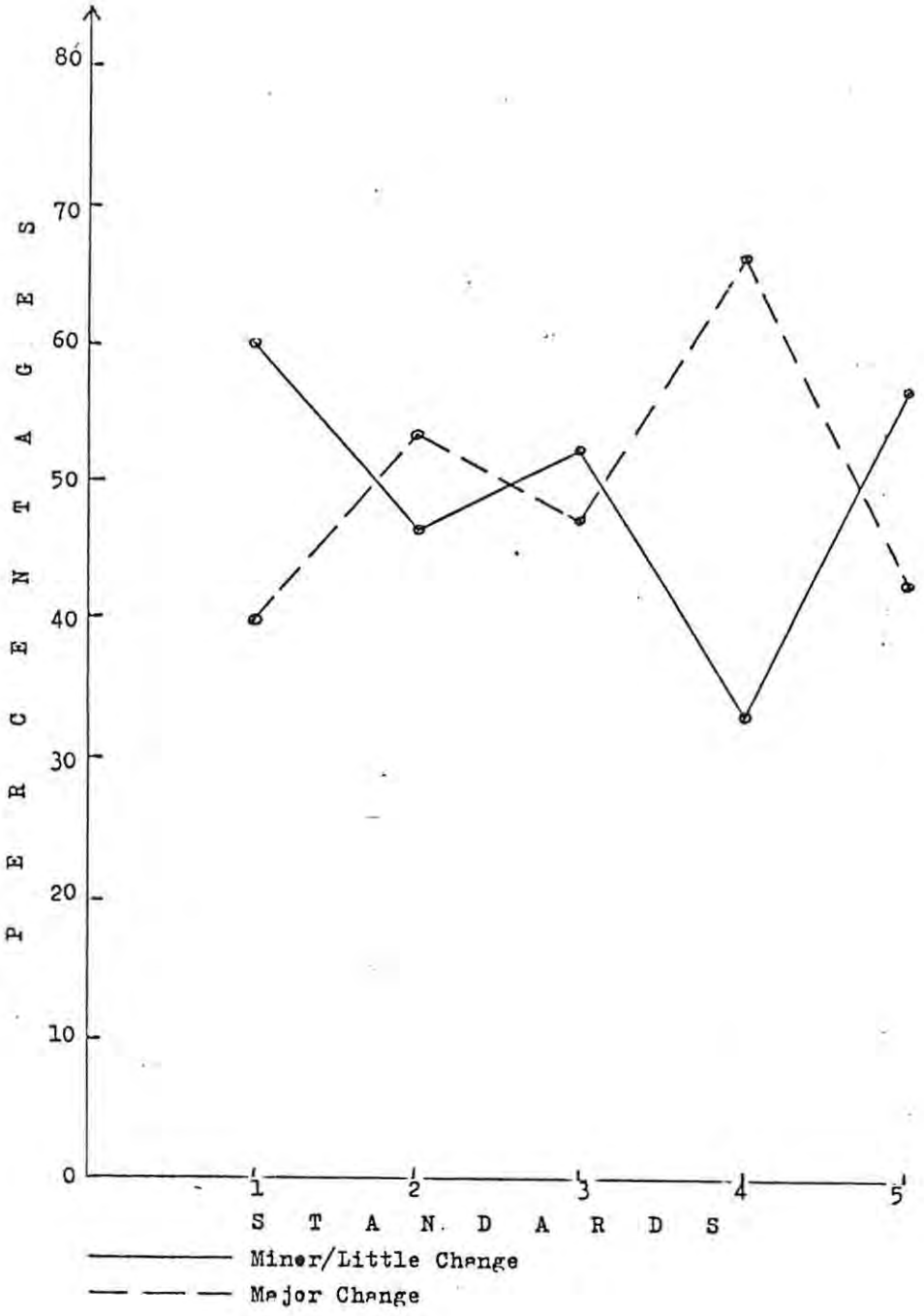
The trends established (TABLE 6.43) seem to confirm this inference. Their is little difference in miscues with major syntactic change for Std 1 (40%) and Std 5 (42,9%). It is interesting to note that the Std 1 reader makes fewer miscues with major syntactic change than the Std 5 reader. Interesting too, is the fact that the Std 4 reader makes the most miscues with major syntactic change. Correspondingly, the Std 1 reader has the highest percentage miscues with little or minor syntactic change (60%), and the Std 4 reader has the least (33,3%).

It would appear that syntactic change is closely related to recognition skills. Readers in the lower standards appear to make miscues at the graphophonic level (see 6.1.5.2 and 6.1.5.3), while the readers in the higher standards make miscues generated by productivity i.e. readers become less text-bound. Analysis of semantic acceptability of miscues (6.1.5.7) will confirm or reject this hypothesis.

TABLE 6.43

TABLE 6.43

GRAPHIC ILLUSTRATION OF SEMANTIC CHANGE RESULTING FROM MISCUES IN ENGLISH, EXPRESSED AS A PERCENTAGE OF FREQUENCIES IN TABLE 6.42



6.1.5.7 Semantic Acceptability

This category attempts to determine whether the semantic acceptability of miscues is related to school standard. The null hypothesis is accepted -- the value of X^2 is

significant/...

significant ($p > 0,05$) (TABLE 6.44), suggesting that miscues do become semantically more acceptable with rise in standard.

TABLE 6.44

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT SEMANTIC ACCEPTABILITY OF MISCUES IN ENGLISH IS INDEPENDENT OF SCHOOL STANDARD

ACCEPTABILITY	STANDARD					TOTAL
	1	2	3	4	5	
None	17	12	11	1	5	46
With Parts of Sentence	11	9	14	8	3	45
In Sentence and Passage	12	20	17	6	13	68
Total	40	41	42	15	21	159

$X^2 = 14,7$

d.f. = 8

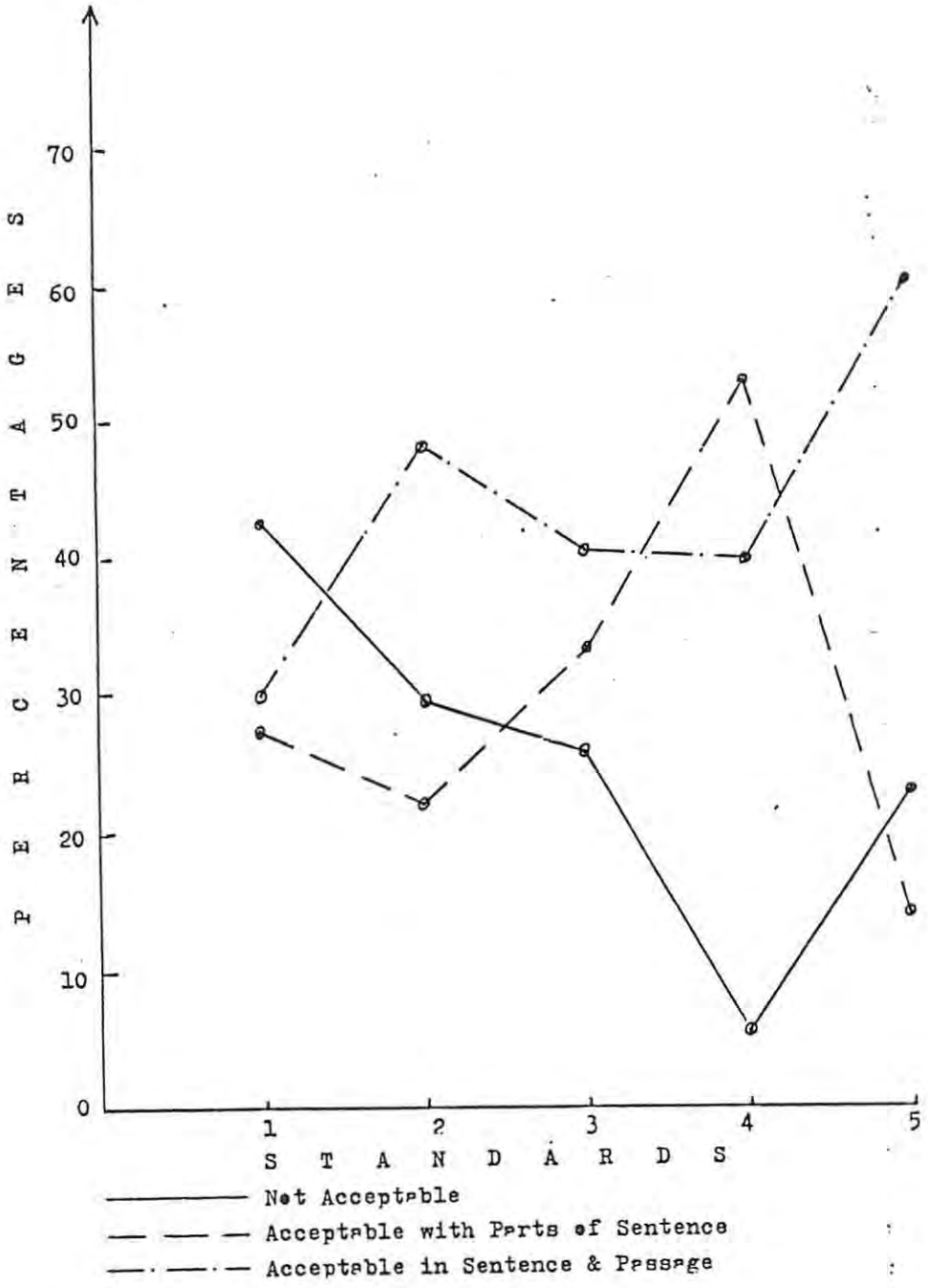
$p > 0,050$

TABLE 6.45 illustrates the developmental trends. Std 1 has the highest percentage unacceptable miscues (42,5%); this is probably due to the reader's grappling with the graphophonemic system. There is a decrease (though not a straight-line trend) in miscues from Std 1 to Std 5 (23,8%). Miscues with acceptability at the level of the phrase and clause, and the sentence and the passage, increase with advance in standard, although it appears that no development takes place from Std 2 (48,8%) to Std 4 (40%). This is probably due to the lack of encouragement in reading programmes, to read for meaning.

TABLE 6.45/...

TABLE 6.45

GRAPHIC ILLUSTRATION OF SEMANTIC ACCEPTABILITY OF MISCUES IN ENGLISH EXPRESSED AS PERCENTAGES OF FREQUENCIES IN TABLE 6.44



The semantic acceptability of miscues in Afrikaans is not related to school standard (TABLE 6.18), while the miscues in English are related to standard (TABLE 6.44). The question which arises is whether semantic acceptability is transferred from the first to the second language.

TABLE 6.46/...

TABLE 6.46 indicates that the value of X^2 is significant ($p > 0,050$) the null hypothesis is rejected. The semantic acceptability of miscues is not related to language medium. It would appear that little transfer of semantic acceptability from Afrikaans to English takes place because this category does not show any significant development ($p > 0,500$) in the first language (TABLE 6.18). In the second language, the development in this category seems to be independent of development in the first language.

TABLE 6.46

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT SEMANTIC ACCEPTABILITY OF MISCUES IS INDEPENDENT OF LANGUAGE

Acceptability	Categories			TOTAL
	None	With Parts of sentence	In Sentence & Passage	
Afrikaans	15	33	52	100
English	46	45	68	159
Total	61	78	120	259

$X^2 = 6,7$

d.f. = 2

$p > 0,050$

6.1.5.8 Semantic Change

Miscues inevitably result in semantic change. The question is whether the extent of semantic change is related to standard. The null hypothesis is rejected for this category -- the value of X^2 is highly significant ($p > 0,005$) (TABLE 6.47), suggesting that semantic change is strongly related to school standard.

TABLE 6.47/...

TABLE 6.47

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT SEMANTIC CHANGE OF MISCUES IS INDEPENDENT OF SCHOOL STANDARD

CHANGE	STANDARD					TOTAL
	1	2	3	4	5	
Minor/Little	4	16	13	6	12	51
Major	8	4	4	0	1	17
Unrelated	28	21	25	9	8	91
Total	40	41	42	15	21	159

$X^2 = 25,3$

d.f. = 8

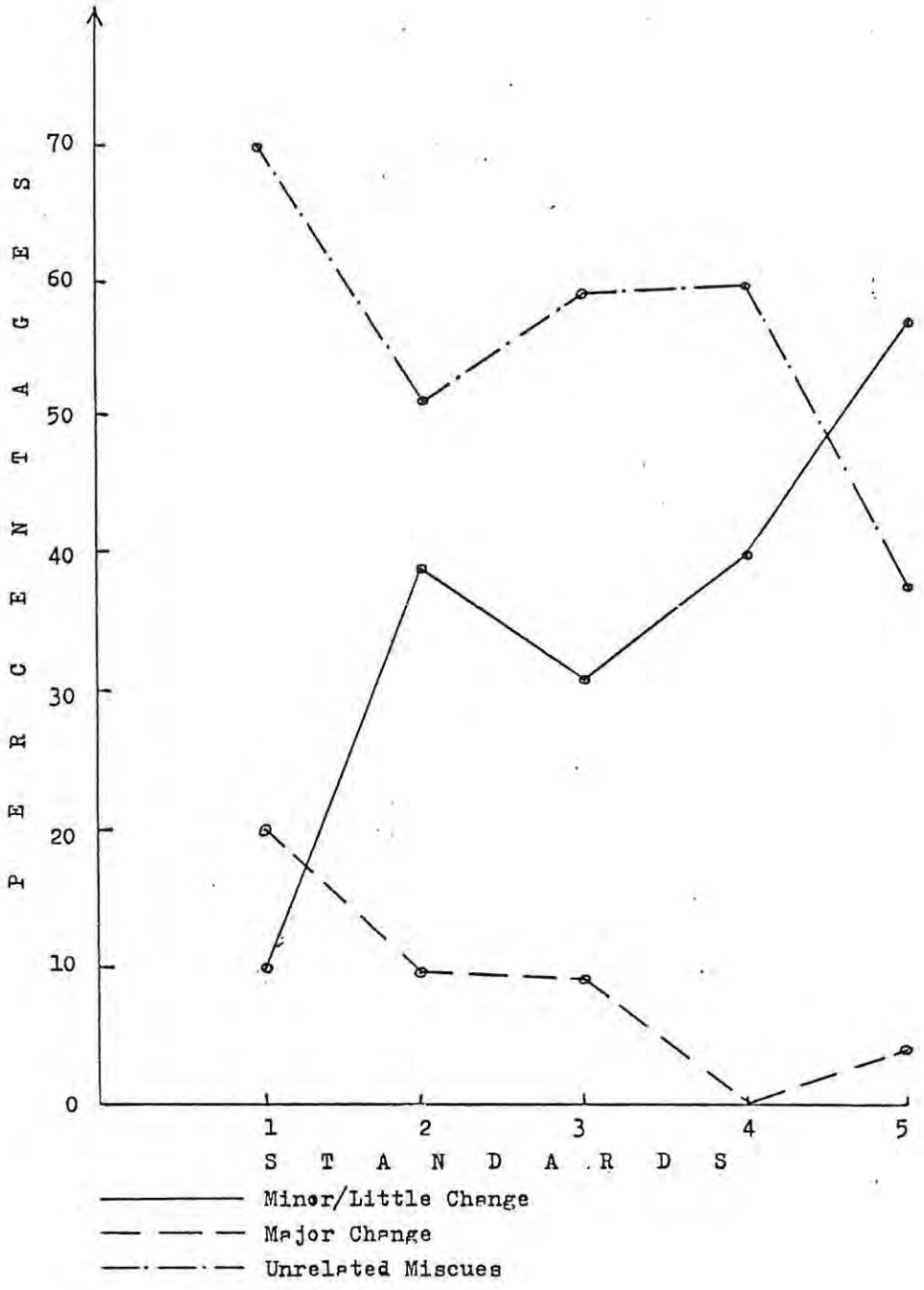
$p > 0,005$

TABLE 6.48 indicates a developmental pattern (though not a straight-line development). Miscues that give rise to little or no semantic change increase from 10% in Std 1, to 57,1% in Std 5, Miscues resulting in major semantic change decrease from 20% in Std 1, to 4,8% in Std 5. Data for these two categories suggest that, with advance in standard, readers make fewer miscues that result in major semantic changes. Semantic changes marked as "unrelated" are not coded because the miscue has no semantic acceptability. This category also indicates a decrease from 70% in Std 1, to 38,1% in Std 5. The high incidence of unrelated miscues is probably due to language deficiency.

TABLE 6.48/...

TABLE 6.48

GRAPHIC ILLUSTRATION OF SEMANTIC CHANGE RESULTING FROM MISCUES IN READING IN ENGLISH, EXPRESSED AS PERCENTAGES OF FREQUENCIES IN TABLE 6.47



6.1.5.9 Correction Strategies

The correction of miscues gives clues to the reader's sense of grammar, and may determine whether he reads for comprehension. In this category, the researcher attempts to find out whether the correction of miscues is related to school standard. The null hypothesis is rejected -- the value of X^2 is highly significant, ($p > 0,005$), suggesting that correction of miscues is closely related to standard (TABLE 6.49).

TABLE 6.49

THE X^2 TEST OF INDEPENDENCE APPLIED TO THE HYPOTHESIS THAT CORRECTION STRATEGIES OF READERS IN ENGLISH ARE INDEPENDENT OF STANDARD

CORRECTION	1	2	3	4	5	TOTAL
None	31	30	21	8	19	109
Yes	2	6	14	7	2	31
Unsuccessful Attempts	7	5	7	0	0	19
Total	40	41	42	15	21	159

$X^2 = 26,6$

d.f. = 8

$p > 0,005$

The developmental pattern is most clearly discernible in the sub-category Unsuccessful Attempts. Though little development takes place from Std 1 to Std 2, Std 4 - 5 readers do not have unsuccessful attempts at correction. (TABLE 6.50). The correction of miscues increases from Std 1 (5%) to Std 4 (46,7%), suggesting increased sensitivity to grammar, and meaning-centredness. The Std 5 reader has a low percentage correction (9,5%), probably because the miscues do not interfere with syntactic and semantic acceptability. An example is miscue numbers 7 and 8, line 16 (APPENDIX IX.E 5):

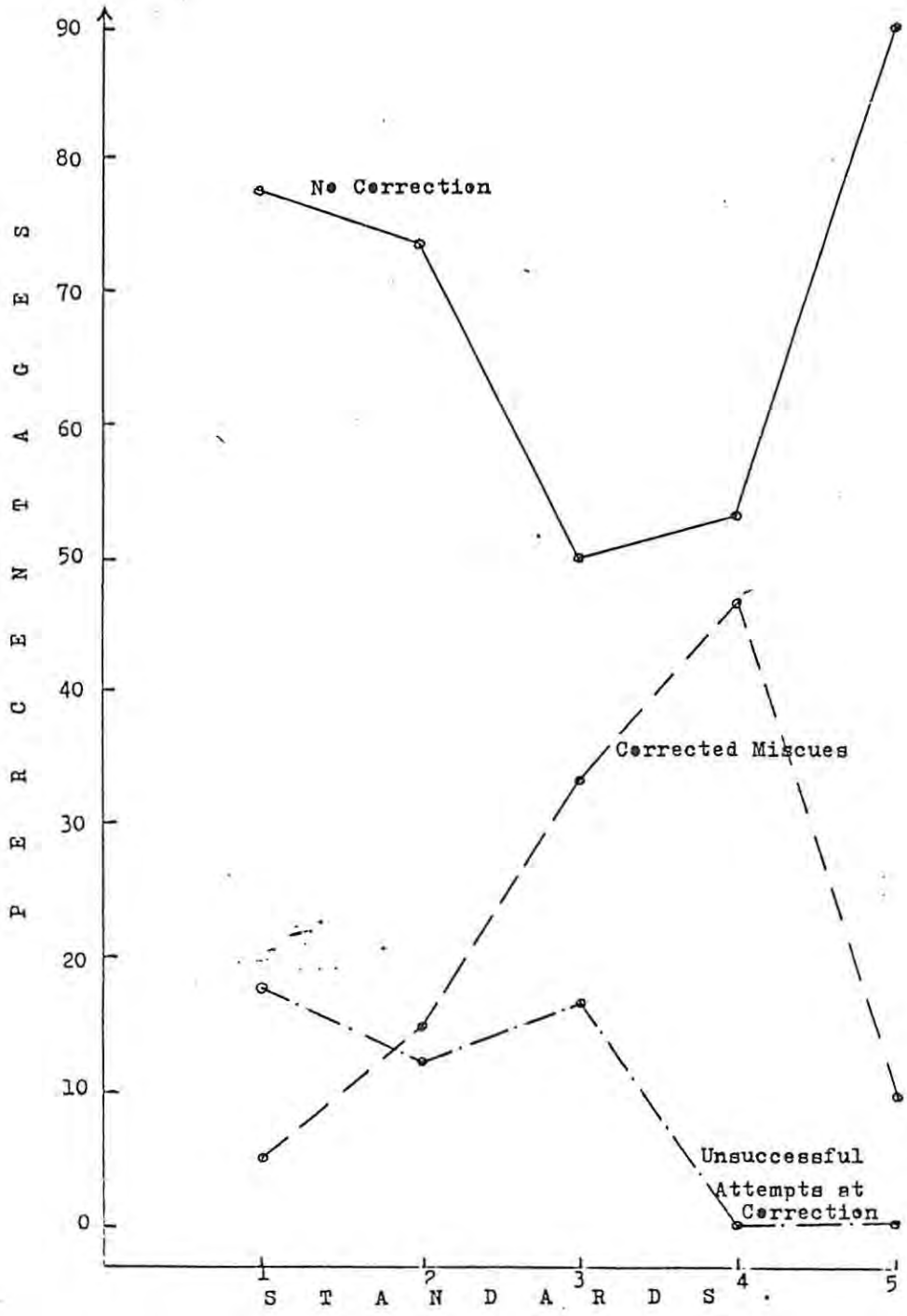
Reader:/...

READER: books ø
TEXT: He read any book he could lay his hands on.

With advance in standard, readers seem to correct only those miscues which interfere with syntactic and semantic acceptability (see miscues nos. 6 and 18 in APPENDIX IX.E5).

TABLE 6.50

GRAPHIC REPRESENTATION OF CORRECTION STRATEGIES OF READERS READING IN ENGLISH, BASED ON PERCENTAGES OF FREQUENCIES IN TABLE 6.49



The %/...

The percentage of uncorrected miscues does not have a definite pattern; it decreases from Std 1 (77,5%) to Std 4 (53,3%), but then it increases to 90,5% in Std 5. This seems to suggest that readers do not correct miscues which do not interfere with comprehension.

6.1.5.10 Dialect

Correction strategy of necessity focuses not only on the influences of miscues on comprehension of the text, but also on their sources. The general expectation is that reading in the second language will reveal influences of the first language, i.e. phonology and syntax of the first language will be superimposed on that of the second language. The five groups, however, indicate that an average of 71,0% of all miscues are not influenced by the ESL dialect (TABLE 6.27). This suggests that the readers' exposure to English inside and outside the classroom, and through television, the radio, and advertisements has a positive influence on phonology and syntax. The above influences will doubtless promote uniformity and discourage idiolects.

TABLE 6.51
PERCENTAGE DIALECT MISCUES

STD	1	2	3	4	5
No dialect	77,5	84,5	61,9	80,0	63,6
Ideolect	-	-	4,8	-	4,5
Super-correct	-	2,4	2,4	33,3	4,5
ESL dialect	22,5	9,8	16,7	20,0	22,7
Allolog	-	2,4	4,8	-	-

N = 5

Those that occur most probably have instructional sources. The Std 3 reader, for example, reads (miscue number 26, line 26, in APPENDIX X.E 3)

READER:/...

READER: he (26)
TEXT: Before she could say anything, ...

The reader is capable of recognition and pronunciation of "she", but because examples in classroom instruction are male-oriented, the reader is "programmed" to substitute the feminine form of the personal pronoun with the masculine.

Super-correction of miscues point to a productiveness in reading, i.e. the reader consciously or unconsciously reads what he thinks the text should read. Such miscues occur in idiomatic expressions as in the case of miscue number 18, made by the Std 3 reader in line 16 (other miscues in the sentence are omitted).

READER: ø
TEXT: He read any book he could lay his hands on.

"To lay hands on" could refer to either "priestly blessing" or "physical assault", but the context determines the meaning, thus eliminating major meaning change which could have occurrred if the expression had appeared in isolation. Supercorrection, in this example, produces a miscue which, in isolation, results in major meaning change.

Another example of supercorrection comes from the Std 5 reader (miscue number 14, line 33):

READER: it's
TEXT: The lady did not think it funny at all

The miscue is, in fact, a normalization of syntactically irregular (unfamiliar) constructions. In the text, the auxilliary "was" is ommited. The reader's retrieval suggests a "feel" for English grammar; she has formed an opinion about the structure of her second language.

As can/...

As can be expected, ESL dialect generates miscues, but the study suggests its influence is minimal (TABLE 6.15E). The miscues do not influence intelligibility as in the miscue produced by four of the five readers (line 35):

READER: excaped
TEXT: He must have escaped from a madhouse

The miscue arises from the consonant cluster [sk] . Though the cluster exists in Afrikaans, it appears in loan words e.g. "eskader", and the [ksk] cluster is more common. The latter is also phonologically more appealing and may become incorporated in a speech community.

Another type of ESL dialect miscue that frequently occurs is the omission of the final "s" in possessives as in "Christiansen's", and in plurals such as "books" and "fingers". The possessive "s" does not occur in Afrikaans. Possessive is indicated by the element "se". The omission of the possessive "s" is common to most ESL readers.

Plurals, in Afrikaans, are normally indicated with the inflection "-e" and not "-s" (Afr. = "boeke"). Some plurals e.g. "vingers", do take the "-s" inflection, but it follows the intrusive [r] . Standard South African English is an [r] -less dialect; the phonological rule for [r] is: [r] $\rightarrow \emptyset$ / ... C. The reader concentrates on this rule at the expense of the plural marker.

Allologs, alternate forms of words, are usually pronouns substituting for proper nouns, e.g. miscue number 26, line 27 as made by the Std 3 reader:

READER: he
TEXT: Before she could say anything, Hans started to hit the top of his hat ...

Abbreviations/...

Abreviations are also alternate forms, e.g. "Chris" for "Christiansen" by the Std 1 reader. Constractions, e.g. "can't" for "cannot" by the Std 1 reader, are yet another example of allologs.

The dialect miscues suggest that, in spite of language deficiencies, readers at all levels are productive; they bring their limited knowledge of the language to the text in an effort to make the reading intelligible.

6.1.5.11 Retelling

Retelling of the Afrikaans story has revealed a developmental pattern in the acquisition of higher-order skills. It can be inferred that retelling the English story will show the same pattern.

Std 1 Reader (APPENDIX X. E1)

The story has as its theme, success as the reward for determination. The Std 1 reader is not capable of extracting this understanding from the text because he is maturationally not capable of extracting theme; he has not acquired this skill in his mother-tongue. Lack in this skill will seriously hamper the processing of written text in both the first and second language.

The reader recounts events in correct sequence: they are poor; his father died; he left school, he wanted to be a famous singer and dancer; he was not good enough. The development of the theme breaks down at this point. It is only during questioning that the rest of the details are remembered: he became a famous author. Because of language difficulty -- the reader does not know the meaning of "author" -- and the piling-up of events, the story is remembered only up to a certain point. This suggests that written information for Std 1 should be of limited proportion.

Cause/...

Cause and effect relationships are also not readily recognized. The reader fails to realize that Hans left school to help supplement his mother's meagre income. This specific information is not given, but has to be inferred from the text.

The Std 1 reader is capable of recalling events, but not able to recognize theme and understand cause and effect relationships. Effective processing is impeded by language difficulties.

Std 2 Reader

The Std 2 reader has not progressed further than the Std 1 reader: she does not recognize theme; she cannot infer information not explicitly stated; and her understanding of propositional development is limited. The latter deficiency is directly attributable to language difficulty, specifically the meaning of "author", which is central to the conclusion.

It is interesting to note that the readers do not guess or venture on own opinion about Hans Andersen's occupation.

Std 3 Reader

The Std 3 reader also does not recognize the theme of the story. Like the Std 1 - 2 readers, she concentrates on events. These are recounted in correct sequence but, again, development of topic breaks down because of language difficulties.

The reader understands why Hans left school, but fails to infer the intention although the text provides the circumstances, viz. the need to supplement his mother's income. Readers at the Std 3 level are unable to make judgements and evaluations from information given in the text.

It is/...

It is significant to note that up till this stage, readers' acquisition of higher-order skills has remained largely constant. Readers have to be prompted in their retelling, word meaning inhibits propositional development, and readers are unable to make inferences from given information.

Std 4 Reader

The Std 4 reader cannot recognize theme. When asked what the message of the story is, the reader responds "Hans did not listen to his mother". Hans's disobedience is one aspect that merely underlines the determination to succeed in whatever he set his mind to. The emphasis, however, is not on Hans's disobedience.

The reader relates events in correct order, an indication that the reader has an understanding of propositional development. The reader also retells the whole story without prompting. This is explained by the reader's knowledge of the meaning of "author" and "fairy tales".

The reader displays a skill in infering information not stated explicitly. She says, "... his mother said he shouldn't read so much because she wants him to earn money ...". The reader shows an understanding of cause and effect relationships. The reader processes information, makes assesments, and draws conclusions.

The Std 4 readers seems to perform better in the English reading than in the Afrikaans reading. (Complexity of the text, events and the relationships that obtain between these is an important factor). In the Afrikaans reading the reader takes certain skills for granted, whereas such skills are not given in reading in the second language; comprehension is consciously achieved. Ironically, it is the lack of native competence that contributes towards greater understanding. Lack in recognition skills forces the reader

to go/...

to go outside the text for meaning.

Std 5 Reader

The Std 5 reader has mastered the higher-order skills discussed under the Std 1 - 4 readers. Events are sequentially related, links are established between these, and unstated information is inferred.

The acquisition of higher-order skills in English follows a developmental pattern similar to that for Afrikaans. As in Afrikaans, Stds 1 - 3 readers concentrate on events and a preoccupation with word attack skills leads to a breakdown in information processing. The effective processing of text in Stds 4 - 5 suggests that reading is a general skill in which cognitive development is the dominant factor.

6.1.5.12 Summary and Evaluation

The following patterns have been established in respect of reading in the second language:

- A developmental pattern is evident for the number of miscues per hundred words; Stds 1-3 have more or less the same MPHW (9,33-9,77), but the MPHW for Std 4-5 shows a marked decrease (0,70-0,48 respectively). The pattern corresponds with that established for miscues in the Afrikaans reading;

- Because of the irregularity of the English spelling system, Std 1 - 3 readers have problems. Stds 4 - 5 readers' mastery of English spelling indicates it is almost on par with mastery of Afrikaans spelling. Mastery of the English spelling is therefore developmental;

- There is an increase in sensitivity to grammar with increase in reading proficiency -- readers

increasingly/...

increasingly process larger units of text;

- There is a developmental pattern in semantically acceptable miscues -- readers' miscues become acceptable with increase in proficiency, notably 30,0% in Std 1 and 61,9% in Std 5;

- Unlike correction strategies for the Afrikaans reading, correction strategies for the reading of the English text do not follow a developmental pattern;

- ESL dialect has minimal influence (9,8% - 22,7%) on the generation of miscues. From Std 2 upwards, readers increasingly bring their own language knowledge to the reading;

- Retelling of the story suggests that acquisition of higher-order skills, viz. development of theme, understanding propositional development and cause and effect relationships, and evaluation of information are related to school standard.

Transfer of skills is determined by significance levels obtained in Afrikaans and English for Stds 1 - 5.

The following significance levels suggest little or no transfer:

- MPHW has a significance of better than 90% (TABLE 6.29)
- Non-words have a significance level of better than 95%. (Std 5 has no Afrikaans non-words).
-

The relatively small values for X^2 suggest that little transfer has taken place -- strategies employed in reading in the second language are acquired independent of acquisition of corresponding strategies in first language reading.

The following significance levels indicate transfer of skills:

- graphic/...

- graphic similarity has significance of better than 0,5%, an indication that knowledge of the graphic system of the first language is transferred to reading in the second language;
- correction of syntactically unacceptable miscues has a significance of better than 2,5%. Std 5 has no syntactically unacceptable miscues in both Afrikaans and English;
- correction of semantically acceptable miscues has significance of better than 1% and correction of semantically unacceptable miscues has significance of better than 0,5% suggesting that cognitive processing structures are transferred to reading in the second language.

The strategies employed in reading in the first language are common to reading in the second language, thus confirming Kenneth S Goodman's (1973) theory of psycholinguistic universals in the reading process. What this study has succeeded in doing is to determine the range of skills present in the two languages, and the relationship between these.

The findings cannot be regarded as definitive (few, if any, studies of this nature are conclusive), but the research does need refinement. Std 4 - 5 readers have too few miscues to provide an accurate picture; a text should be selected which will generate a minimum of twenty-five miscues, and yet remain within the comprehension range of all readers in the testing project.

Apart from Syntactic Change ($p > 0,250$) (TABLE 6.42), all the categories for oral reading in English, the second language, have significance levels ranging from $p < 0,050$ to $p > 0,005$. There is considerable development through the standards, but judging from the small X^2 for Afrikaans and English, ranging from $p > 0,900$ to $p > 0,050$, the range of development in English is within the limits of development in Afrikaans.

Although/...

Although the graphophonemic system continues to develop in English, the areas that show evidence of developmental backlog are syntactic and semantic acceptability. As suggested in 6.1.4.11 (Summary and Evaluation of Afrikaans reading analysis), reading instruction should focus on the development of higher-order skills, viz. propositional development, understanding theme and development of judgement (critical evaluation of text). These skills can only be developed effectively in silent reading.

6.2 SILENT READING

Oral miscue analysis has shown that the reading behaviour of the pupils in this study is similar to that of readers elsewhere in the world, i.e. they employ the same strategies (Chapter Four). It can therefore be assumed that, given ideal circumstances vis-a-vis social environment, motivation, materials and instruction, acquisition of reading skills will correspond closely with that of readers in other parts of the world. Any backlog will therefore be directly attributable to factors related to these circumstances (See Chapter Seven).

The above assumption is tested through an investigation of:

(1) the acquisition of specific reading skills in Afrikaans and English; an assessment according to the scale provided by Singer and Donlan (1980); and a comparison with Kennedy's (1981) developmental chart; and
(2) comparisons of acquisition of the skills in the two languages through Chi-square distributions.

First, the validity and reliability of the tests need to be ascertained.

6.2.1 Test Criteria

The tests meet the prescribed requirements. Examination

reveals/...

reveals that:

- they look right, i.e. on the surface they look reasonable and "respectable", they have face validity;

- the content is based on prescribed primary school literature; they have content validity;

- the formats of the various sub-tests are widely employed in classroom and testing practices; they have construct validity; and

- the scores of the upper 27% and the lower 27% coincide with ratings of previous years' achievment/placement tests; they have empirical validity.

Reliability is established by the objective nature of the items, the easy scoring, and the economy of materials.

Whole-test reliability is calculated according to the formula suggested by Heaton (1975:157):

$$r = \frac{N}{N-1}\left(1 - \frac{m - (N-m)}{Nx^2}\right)$$

where N = the number of items in the test;
m = the mean score on the test for all the testees; and
x = the standard deviation of all the testees' scores.

The index of 0,95 obtained for the A-Test (APPENDIX XIVA), and that of 0,94 for the E-Test (APPENDIX XIX.E) suggest high reliability for both tests.

The skills isolated for testing are regarded as crucial to efficient reading by Grellet (1981), Harri-Augstein, et al (1982) and Singer and Donlan (1980), These are discussed under 5.3.1.

6.3.2 The/...

6.2.2 The Afrikaans Test or A-Test (APPENDIX III)

According to Singer and Donlan (1980), scores above 90% represent the fluency level; scores between 70% and 90% represent the instruction level; and scores below 70% represent the frustration level.

Average group scores for the A-Test (TABLE 6.28) indicate that all the readers (Stds 1 - 5) are at the frustration level. Since the tests are based on Std 3 tests, the Std 3 readers are expected to be at the instruction level, and the Std 4 - 5 readers at the fluency level.

TABLE 6.52
PERCENTAGE GROUP SCORES

SUB-TEST	STD 1	STD 2	STD 3	STD 4	STD 5	AVE
I	29	48	56	86	87	62,2
II	16	31	24	48	58	35,4
III	22	22	72	64	84	52,8
IV		28	55	74	81	47,6
V	23	39	76	55	50	48,6
VI	4	2	62	62	74	40,8
VII	8	34	62	50	66	44,0
VIII		2	36	46	42	25,2
TOTAL AVE.	14	25,75	55,38	60,75	67,75	44,6

N = 50

Total average scores do, however, reveal a developmental pattern - 14% in Std 1, and 67,75% in Std 5. For individual sub-skills, a hierarchy emerges.

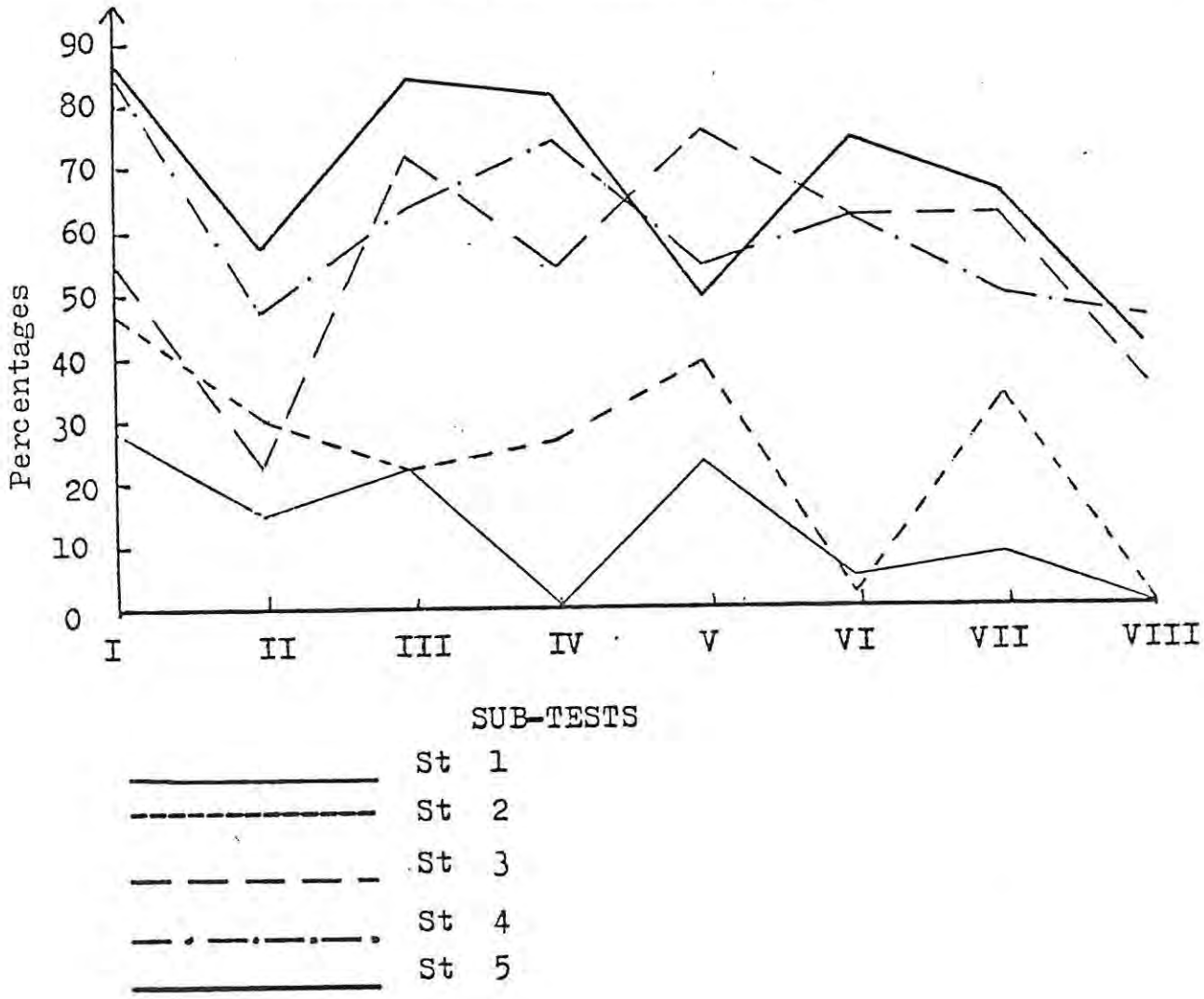
1 - 62,2% for global skills (Sub-test I);
2 - 52,8% for understanding cause and effect relationships and sequence (Sub-test III);
3 - 48,6% for previewing and anticipating (Sub-test V);
4 - 47,6 for scanning, referring and synthesizing (Sub-test IV);

5 - 44,0%/...

5 - 44,0% for understanding text structure and coherence (Sub-test VII):
6 - 40,8% for understanding propositional development (Sub-test VI);
7 - 35,4% for understanding synonymy and antonomy (Sub-test II); and
8 - 25,2% for understanding communicative value (Sub-test VIII).

The pattern will vary within groups. TABLE 6.53 illustrates the developmental pattern. Performances in the sub-tests are analyzed in the extended skills analysis below (6.2.3)

TABLE 6.53
SKILLS DISTRIBUTION (A-TEST)



6.2.3 Extended Skills Analysis

6.2.3.1 Global Skills (SUB-TEST I)

In this sub-test, readers are expected to supply missing words (cloze procedure). Omitted words include five content words, viz. pronoun "hulle", nouns "tweeling" and "wyfiewolf", verb (past particle) "geneem" and adjective "groot"; and five function words, viz. prepositions "as" and "op", article "die", possessive marker "se" and past tense marker "het".

The exercise tests a range of skills combinations, viz. predicting at the level of the text, anticipating word classes of missing words, inferring missing words, and establishing relationships between language structures.

According to Kennedy (1981:331) the ability to perform these tasks is already present at the Std 1 level, yet the Std 1 readers in this study have attained only 29%. The Std 3 reader, Kennedy (ibid) claims, "knows 95% of the words in a basal reading text written on a fifth-grade (Std 3) level". The 56% for the backlog in these skills (TABLE 6.54).

TABLE 6.54

PERCENTAGE GROUP PERFORMANCE (SUB-TEST I)

STD	1	2	3	4	5
AV. %	29	48	56	86	87

N = 50

Group performances reveal a developmental pattern from Std 1 - Std 4, but the Std 5 score suggests stagnation (TABLE 6.54). The discrimination index (0,58) further confirms the insufficient rate of development from a rudimentary presence of the skill at the Std 1 level.

TABLE 6.55/...

TABLE 6.55
FACILITY VALUE AND DISCRIMINATION (SUB-TEST I)

ITEM	1	2	3	4	5	6	7	8	9	10	AV.
FV	0,71	0,61	0,64	0,43	0,39	0,54	0,61	0,82	0,71	0,46	0,59
D	0,43	0,64	0,43	0,29	0,79	0,93	0,86	0,36	0,29	0,79	0,58

Significant is the nature of the miscues, i.e. their quality (TABLE 6.56). Stds 1 - 4 readers tend to produce more miscues that are unacceptable at the semantic level. Semantic acceptability of miscues is developmental.

Grammatical function is also developmental, though there is no significant progression from Std 2 - Std 3, and from Std 4 - Std 5. Syntactic acceptability follows a similar pattern. With increase in reading proficiency, there is an increase in anticipation of word classes, sensitivity to grammar, and understanding of the text.

TABLE 6.56
PERCENTAGE UNACCEPTABLE MISCUES

STD	1	2	3	4	5
GRAMM FUNC	76,0	63,5	65,9	35,7	42,2
SYNT ACC	74,6	57,7	59,1	35,7	38,5
SEM ACC	100,0	94,2	88,6	57,1	38,5

N = 50

6.2.3.2 Understanding Synonymy and Antonomy

This skill involves inferring the meanings of unfamiliar words, i.e. deducing the meaning and use of unfamiliar lexical items and understanding relations between parts of a text through lexical devices of synonymy, antonomy and cohesion, using textual clues.

Kennedy (1981:331) says this skill is already present in the Std 1 reader who "is becoming aware of the shades of difference in the meanings of synonym words." The Std 2 reader "is able to use all the word attack skills in attacking new words" (op cit, 332). The performance of the Std 1 - 3 readers in this study suggests, however, that the development of this skill remains at an elementary level. (TABLE 6.57). The performance of the Std 4 - 5 readers (48% - 58%) indicates serious shortcomings at the end of the primary school level.

TABLE 6.57
PERCENTAGE GROUP SCORES (SUB-TEST II)

STD	1	2	3	4	5
AV. %	16	31	24	48	58

N = 50

The average facility value (FV) of 0,39 suggests low competence; readers encounter difficulties with synonymy and antonomy (TABLE 6.58).

TABLE 6.58
FACILITY VALUE AND DISCRIMINATION (SUB-TEST II)

ITEM	11	12	13	14	15	16	17	18	19	20	AV.
FV	0,42	0,36	0,61	0,54	0,43	0,32	0,39	0,43	0,11	0,29	0,39
D	0,14	0,42	0,50	0,50	0,57	0,21	0,50	0,71	0,07	0,57	0,38

The discrimination index of 0,38 indicates relatively poor discrimination between the upper 27% and the lower 27% - development of the skill is retarded. Though the skill is still in its primary stages of development at the Std 1 level, it is expected to be at an advanced level of development at the Std 3 level. According to Kennedy (op cit, 334), the Std 3 reader "has the ability to read fifth-grade (Std 3) materials literally, inferentially, and critically."

6.2.3.3/...

6.2.3.3 Understanding Cause and Effect Relationships (Sub-Test III)

This ability involves understanding relations between parts of a text through the use of logical connections which are essential to the understanding of ideas and facts. Testees are expected to complete blanks by choosing the appropriate link words from a given list. At the Std 1 level, the reader "is becomming more proficient in seeing relationships among facts ... " (Kennedy, op cit, 331). At the Std 2 level, he "can see relationships among associated ideas (op cit, 333). Evidence (TABLE 6.59) suggests, however, this skill is still at a rudimentary level in Std 1 - 2 readers.

TABLE 6.59
PERCENTAGE GROUP PERFORMANCE (SUB-TEST III)

STD	1	2	3	4	5
AV. %	22	22	72	64	84

N = 50

The growth spurt from Std 2 - 3 (22% - 72%) suggests a stimulated prod in an attempt to catch up on developmental backlog. This spurt loses its momentum since, because of its belated emergence, it fails to develop to its full potential at the Std 5 level.

TABLE 6.60
FACILITY VALUE AND DISCRIMINATION (SUB-TEST III)

ITEM	21	22	23	24	25	AV.
FV	0,46	0,29	0,46	0,54	0,82	0,51
D	0,50	0,43	0,79	0,93	0,36	0,60

The Average/...

The average facility value of 0,51 (TABLE 6.60) suggests readers did not find the task particularly difficult, but the average discrimination index of 0,60 indicates a shortfall in mastery, particularly since the Std 1 - 2 readers who constitute the lower 27% (APPENDIX XIII.A) have acquired only rudimentary skill in understanding relations between facts and ideas.

6. .3.4 Referring, Scanning and Synthesis (Sub-Test IV)

The tasks require an ability to infer meaning, to retrieve referents, to anticipate information contained in a passage, and to recognize the theme from glancing at titles and summaries. The combination of these skills constitutes the skill of previewing.

In the sub-test, the testee is expected to read through a synopsis of a story and match it with a title in the table of contents (ANNEXURE XII.A). According to Kennedy (op cit, 328-329), a Second Grade (Sub-Standard B) reader "uses tables of content and index in locating selections and specific information ... skim to find a name, number, colour, specific bit of information, or the answer to a question." At the Std 1 level, he "is proficient in using the tables of contents and index, and page numbers in locating information ... (and) is able to select the main ideas" from a passage, and to "choose appropriate titles for materials read" (op cit, 328-329).

The skills combination is therefore present in the Sub-standards, and reaches a fairly high degree of sophistication in Std 2. The data in this study indicate the readers have a serious backlog (TABLE 6.61).. The skill is non-existent in Std 1; the readers at this level are not capable of using tables of contents, even when summaries/ synopses are given in straight-forward, simple language. The skill only emerges at the Std 2 level, and then develops in leaps and bounds from Std 3 upwards. Because

acquisition/...

acquisition of the skill has been delayed, complete mastery has not yet been attained.

TABLE 6.61
PERCENTAGE GROUP PERFORMANCES (SUB-TEST IV)

STD	1	2	3	4	5
AV. %	-	28	55	74	81

N = 50

The average facility value of 0,45 suggests the items are at an appropriate level of difficulty, and the discrimination index of 0,81 indicates the acquisition and refinement of the skill is developmental (TABLE 6.62)

TABLE 6.62
FACILITY VALUE AND DISCRIMINATION (SUB-TEST IV)

ITEM	26	27	28	29	30	31	32	33	34	35	AV.
FV	0,54	0,54	0,46	0,36	0,39	0,43	0,50	0,43	0,39	0,50	0,45
D	0,93	0,79	0,64	0,71	0,64	0,86	1,00	0,86	0,64	1,00	0,81

6.2.3.5 Previewing - Anticipation

This ability involves the reconstruction of the written text prior to the actual reading - psychological sensitizing. Testees are required to guess whether statements about a given subject are true or false. Kennedy (op cit, 330) says that, in Sub-Standard B (Second Grade), the reader "is becoming more proficient in ... predicting outcomes, and forming mental images." The data show that, for the readers in this study, the skill is elementary at the Std 1 level, develops slowly through Std 2 (39%), peaks at Std 3 (76%), and recedes through Std 4 - 5 (Table 6.63).

TABLE 6.63

TABLE 6.63
PERCENTAGE GROUP PERFORMANCE (SUB-TEST V)

STD	1	2	3	4	5
AV. %	23	39	76	55	50

N = 50

The facility value of 0,43 suggests readers find the task difficult, and the discrimination index of 0,39 is an indication of inadequate progession (TABLE 6.64). This is one task in which performance by the readers in the lower standards is expected to equal or better that of readers in the higher standards. It is disturbing to discover that young children seem to lack imagination and the inclination towards risk-taking. The decline in the Std 4 - 5 performances suggests caution -- an avoidance of high-risk options; readers opt, instead, for the more conservative alternatives. This tendency may have its roots in the discouragement of guessing, and in a disillusionment with fantasy.

TABLE 6.64
FACILITY VALUE AND DISCRIMINATION (SUB-TEST V)

ITEM	36	37	38	39	40	41	42	43	44	45	AV.
FV	0,64	0,25	0,28	0,54	0,39	0,54	0,50	0,57	0,25	0,43	0,43
D	0,14	0,50	0,21	0,50	0,79	0,36	0,29	0,43	0,07	0,57	0,39

6.2.3.6 Understanding Propositional Development (Sub-Test VI)

This ability involves sensitivity to text, and anticipation at the level of the sentence and across sentences. Testees are required to supply missing punctuation marks from a passage. According to Kennedy (op cit, 328), the Sub-Standard A (Grade One) reader "understands the use of the period (full stop), comma, question mark, and exclamation point." The Sub-Standard B (Grade Two) reader "is beginning

to edit/...

to edit all written words for errors in spelling, word usage, and punctuation ... (and) gives attention to punctuation during oral reading" (ibid).

TABLE 6.65
PERCENTAGE GROUP PERFORMANCE (SUB-TEST VI)

STD	1	2	3	4	5
AV %	4	2	62	62	74

N = 50

By Kennedy's standards, the Std 1 reader ought to be fully proficient. However, data obtained for readers in this study (TABLE 6.65) indicate the skill is virtually non-existent in Std 1 - 2 readers, and emerges only in Std 3. These readers are two years behind normal development, a lag that has serious consequences since the level of acquisition remains static through Std 3 to Std 5. This deficiency may have its source in the stage at which exercises aimed at the development of the relevant skills are presented in the classroom. An inability to understand propositional development will seriously hamper learning.

6.2.3.7 Sensitivity to Text Structure and Coherence (Sub-Test VII)

This ability involves understanding relations between parts of a text. Testees are required to indicate sentences that are not relevant to the paragraph.

According to Kennedy (op cit, 330), Sub-Standard B (Grade Two) readers "can recognize irrelevant information when using a text book ...". The readers in this study are a year behind Kennedy's readers - at 8% for Std 1, this skill is just emerging (TABLE 6.66). Significant acquisition is only evident in Std 2 (34%), but because of late development, acquisition remains static through

Std 3 - 5/...

Std 3 - 5. Std 5, with an average 66%, has not attained mastery of the tasks.

TABLE 6.66
PERCENTAGE GROUP PERFORMANCE (SUB-TEST VIIA)

STD	1	2	3	4	5
AV %	8	34	62	50	66

N = 50

The average facility value of 0,45 (TABLE 6.67) suggests readers encountered problems in performance of the tasks. The discrimination index of 0,49 indicates only moderate distinction between the upper and lower 27%. The problem stems from classroom practices where reading programmes are built around story-line texts and seldom (if ever) on logical arrangement/development of ideas and facts in content materials (Chapter Seven). Cohesion and coherence are neglected in reading in the primary school.

TABLE 6.67
FACILITY VALUE AND DISCRIMINATION (SUB-TEST VIIA)

ITEM	51	52	53	54	55	AV
FV	0,57	0,36	0,50	0,14	0,68	0,45
D	0,43	0,57	0,71	0,07	0,64	0,49

6.2.3.8 Understanding Communicative Value (Sub-Test VIIIA)

This ability involves recognition of functions of sentences (language functions) within a given context. The reader brings his language knowledge and his experience of the world to the interpretation of information.

According to Kennedy (op cit, 330), this ability to interpret information is already present in Sub-Standard B --

the reader/...

the reader at this level "uses his own ideas and beliefs as a basis for interpreting". This ability is closely related to language competence which, according to Moskowich (1982:76) is attained at the age of five. Any deficiency in performing the tasks will therefore be related to the written language.

TABLE 6.68
PERCENTAGE GROUP PERFORMANCE (SUB-TEST VIII)

STD	1	2	3	4	5
AV %	-	2	36	46	42

N = 50

The readers in this study develop this skill only at the Std 3 level -- it is virtually non-existent in Stds 1 - 2, three to four years later than Kennedy's readers. The result is limited growth; the performance for the groups Std 3 - 5 shows no significant increase in proficiency. This deficiency in awareness of the subtleties of the language and the ability to interpret written language will lead to distortion of messages and break-down in communication due to misunderstanding.

TABLE 6.69
FACILITY VALUE AND DISCRIMINATION (SUB-TEST VIII)

ITEM	56	57	58	59	60	AV
FV	0,43	0,36	0,25	0,00	0,29	0,27
D	0,86	0,43	0,21	0,00	0,57	0,21

The deficiency is further illustrated by the relatively low average facility value of 0,27 (TABLE 6.69); readers in both the upper and lower 27% encountered problems with the tasks. The discrimination index of 0,21 indicates the rate of development, i.e. increase in proficiency, remains insignificant.

6.3.3.9/...

6.2.3.9 Summary and Evaluation

The following skills develop at the Std 1 level:
- Inferring word meanings (appropriate level);
- Understanding cause and effect relationships and chronological sequence (two years late); and
- Anticipation (a year late).

The following skills emerge at the Std 2 level, though they are present in negligible measure in preceding levels:
- Previewing (two years late); and
- Sensitivity to structure and coherence (two years late).

At the Std 3 level, the following skills emerge:
- Predicting (punctuation) at the level of the text, and across sentences (three years late); and
- Understanding communicative value of sentences and utterances (three years late).

Of the eight skills/skills combinations identified as important for text processing, only two develop at the appropriate level; one develops a year late: three emerge two years late; and the remaining two develop three years late. None of these skills is fully developed by the end of the primary school phase.

The implications of the skills deficiencies is that, if children do not acquire the necessary skills in their mother-tongue at the appropriate level, the very real danger exists that they may never develop to maximum potential. Because of their late emergence/acquisition due to failure to trigger the relevant cognitive structures at the appropriate time, the children will reach a plateau in their skills development and this in turn will seriously hamper information processing at higher levels of education where reliance on text will increasingly take precedence over the teachers' interpretive role.

6.2.4 The English test or E-test (APPENDIX XVII)

The test for reading skills in English was administered on April 17, 1984, exactly 23 days after administration of the Afrikaans test.

Analysis of the scores traces the development of skills in English from Std 1 - Std 5.
The group scores for the E-Test are as follows(TABLE 6.7):

TABLE 6.70
PERCENTAGE GROUP SCORES

SUB-TESTS	STD 1	STD 2	STD 3	STD 4	STD 5	AV.
I	8	47	41	76	91	52,6
II	29	31	26	39	71	39,2
III	2	11	13	21	21	13,2
IV	1	14	27	61	65	33,6
V	32	59	59	61	78	57,8
VI	9	13	15	33	33	20,6
VII	10	22	31	19	51	26,6
VIII	3	17	13	16	17	13,2
TOTAL AV.	11,75	26,78	28,13	40,75	53,38	32,15

N = 50

Data indicate that readers in the primary school (Std 1 - 5) are not competent readers in English. All the readers in this study are at the frustration level, i.e. below 70% (according to Singer and Donlan's (1981) scale of readability). This is to be expected since the readers have not developed the required reading skills satisfactorily in Afrikaans.

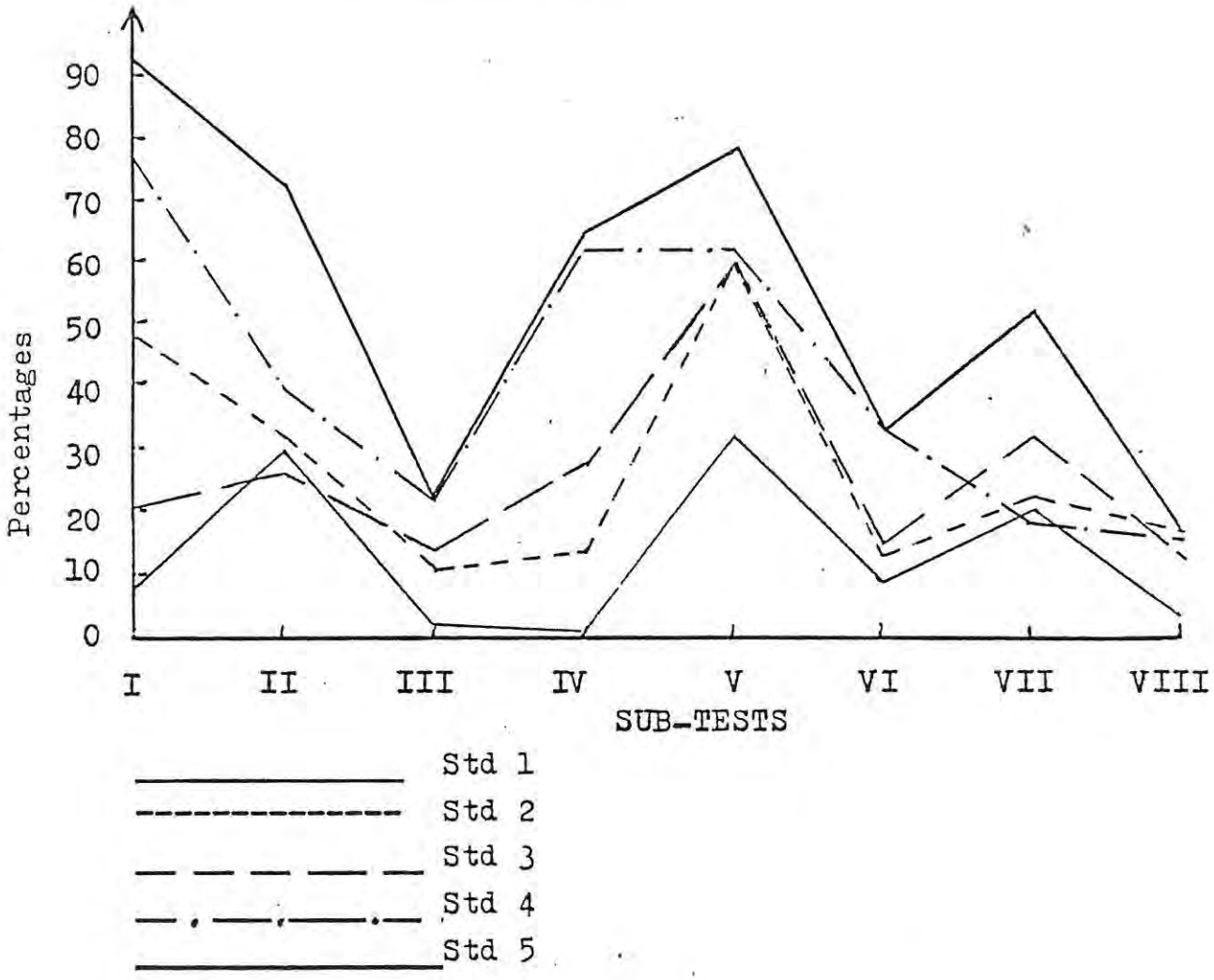
Total group averages indicate that, as in the Afrikaans reading, that acquisition of skills is developmental, ranging from 11,75% in Std 1, to 53,38% in Std 5 (TABLE 6.70) Development is stagnant from Std 2 - Std 3 (26,78% and 28,23% respectively). Language deficiency accounts for this.

In addition/...

In addition, Std 3 has been identified as the cut-off or transition stage in miscue procedure (6.2).

For individual sub-skills, a hierarchy of skills acquisition and development emerges (TABLE 6.70):

TABLE 6.71
SKILLS DISTRIBUTION (E-TEST)



- 57,8% for previewing and anticipating (sub-test V);
- 52,6% for global skills (Sub-test I);
- 39,2% for understanding synonymy and antonomy (Sub-test II);
- 33,6% for scanning, referring and synthesizing (Sub-test IV);
- 26,6% for understanding text structure and coherence (Sub-test VII)

20,6% for/...

- 20,6% for understanding propositional development (sub-test VI)
- 13,2% for understanding cause and effect relationships and sequence (Sub-test III); and
  for understanding communicative value (Sub-test VIII).

Only five of the skills, viz. (1) global skills; (2) understanding propositional development; (3) referring, scanning and synthesizing; (4) previewing and anticipating; and (5) understanding cause and effect relationships, show a straight-line developmental pattern (TABLE 6.71). For the latter, however, no development takes place from Std 2 - Std 3. For propositional development, there is little progression from Std 1 - Std 3, and no progression from Std 4 - Std 5.

For the rest of the skills, no straight-line development exists. Std 1 readers perform better than Std 2 readers on understanding synonymy and antonomy; Std 4 readers do worse than all the groups on understanding text structure and coherence; and the Std 5 performance on understanding communicative value equals that for Std 2.

The irregular and haphazard development of the skills can be attributed to the absence of a developmental reading programme (Chapter 7). An extended skills analysis of individual skills will provide greater insights.

6.2.5 Extended Skills Analysis

6.2.5.1 Global Skills (SUB-TEST I)

The tasks establish readers' skills at utilizing language redundancies and expectancies. Readers are required to infer omitted words in a text. Five of the omissions are content words (pronouns "he" and "this"; nouns "earth", "country" and "husband") and five are function words (auxiliary "was"; preposition "of"; modal "would"; and conjuction "and").

TABLE 6.72/...

TABLE 6.72 indicates that the skill is just emerging at the Std 1 level, develops rapidly through the year, remains constant through Std 2 - 3, and increases rapidly through Stds 4 - 5 to peak at 91%. This is the skill/skills combination that rates highest, suggesting a sensitivity to grammar, and ability to utilize language cues.

TABLE 6.72
PERCENTAGE GROUP SCORES (SUB-TEST I)

STD	1	2	3	4	5
AV %	8	47	41	76	91

N = 50

The inference is supported by the facility value and discrimination index (TABLE 6.72). The average facility value of 0,50 is an indication that the items are at an appropriate level of difficulty, and that the readers in the study could cope with the tasks. The discrimination index of 0,79 is an indication that acquisition of the composite skill is developmental; the items discriminate between readers in the top 27% and readers in the lower 27%.

TABLE 6.73
FACILITY VALUE AND DISCRIMINATION (SUB-TEST I)

ITEM	1	2	3	4	5	6	7	8	9	10	AV
FV	0,71	0,57	0,43	0,43	0,43	0,50	0,43	0,64	0,50	0,32	0,50
D	0,57	0,86	0,57	0,86	0,86	1,00	0,86	0,71	1,00	0,64	0,79

The developmental pattern, however, is true only for grammatical function (TABLE 6.74). The percentage errors with unacceptable grammatical function for Std 5 (55,6%) is considerably lower than that for Std 1 (84,8%), though performance in this category does not follow a straight-line decrease.

TABLE 6.74/...

TABLE 6.74
PERCENTAGE UNACCEPTABLE ERRORS

STD	1	2	3	4	5
GRAM FUNC	84,8	86,8	72,9	83,3	55,6
SYNT ACC	92,4	86,8	93,2	83,3	88,9
SEM ACC	93,5	98,1	44,1	95,8	100,0

N = 50

No definite pattern is established for syntactic and semantic acceptability; all the errors made by the Std 5 readers are semantically unacceptable, and syntactically unacceptable errors show no significant differences for the different groups.

The developmental pattern is therefore determined by quantitative data, but negated by qualitative data. Analysis of scores from the remaining sub-tests will give more qualitative evidence.

6.2.5.2 Understanding Synonymy and Antonymy (Sub-test II)

The skill of understanding synonymy and antonymy ranks third for both the test as a whole, and Std 5. The test requires utilizing knowledge of language and context clues, i.e. calculating lexical value.

TABLE 6.75
FACILITY VALUE AND DISCRIMINATION (SUB-TEST II)

ITEM	11	12	13	14	15	16	17	18	19	29	AV
FV	0,64	0,79	0,46	0,29	0,61	0,39	0,54	0,11	0,64	0,21	0,47
D	0,57	0,29	0,79	0,43	0,79	0,21	0,79	0,07	0,71	0,14	0,43

The average/...

The average facility value of 0,47 suggests the sub-test as a whole is of reasonable difficulty. Item 18, with a F.V. of 0,11 posed problems. All four alternatives are semantically acceptable, "Users" as a synonym for "consumers" is not determined by the context, and readers guessed at its meaning, hence the negative discrimination (D = 0,14). The same is true for item 20: readers do not know either the meaning of "distributed" or alternatives "sterilized" and "refrigerated".

TABLE 6.76
PERCENTAGE GROUP PERFORMANCE
(SUB-TEST II)

STD	1	2	3	4	5
AV %	29	31	26	39	71

N = 50

The average discrimination index (0,43) suggests development is below expectation, an inference attested to by the average group performances (TABLE 6.76). Scores for Std 1 - 3 show no significant progression, with Std 3 actually scoring lower than both Std 1 and Std 2. There is a slight increase in performance of the Std 4 readers, but the only significant presence of the skill is displayed by the Std 5 readers. The inference is that readers in Std 1 - 4 have a deficiency in synonymy and antonomy due to linguistic deficiency, a factor known as the short-circuit hypothesis.

6.2.5.3 Understanding Cause and Effect (Sub-Test III)

The tasks require an understanding of logical development by means of supplying the appropriate logical connectors, viz. "if", "because", "thus", "but", and "since" which express condition, reason, cause and contradiction, and "before", "then", "when", "while" and "until" which express time sequence.

The test/...

The test average ranks lowest on the hierarchy of skills acquisition for all testees, and fifth for Std 5. Its lowly position on the ranking is an indication of readers' deficiency.

TABLE 6.77
PERCENTAGE GROUP PERFORMANCE
(SUB-TEST III)

STD	1	2	3	4	5
AV %	2	11	13	21	21

N = 50

Group performances (TABLE 6.77) suggest it is non-existent in Std 1 (2% is scored by guessing), and remains at a rudimentary level up to Std 5.

TABLE 6.78
FACILITY VALUE AND DISCRIMINATION (SUB-TEST III)

ITEM	21	22	23	24	25	AV
FD	0	0,46	0,29	0,29	0,25	0,26
D	0	0,93	0,57	0,43	0,36	0,46

The above inferences are supported by the average facility value and the average discrimination index for the Sub-test (TABLE 6.78). The average facility value of 0,26 is an indication of readers' difficulty with the tasks, while the discrimination index of 0,46 is an indication of little qualitative improvement of the skill from all the readers to understand simultaneous time ("while"). They are reasonably competent in understanding time after, viz. item 23 ("until"), condition, viz. item 24 ("if"), and the concept time, viz. item 25 ("when"), but have yet to develop to a satisfactory level. The readers in this study will have difficulty following sequences of events in, e.g. history, and cause and effect

relationship/...

relationships in subjects like science and mathematics.

6.2.5.4 Reference, Scanning, Synthesis (Sub-Test IV)

The test determines whether readers are able to use tables of contents, locate information in a table and match a synthesized version with an appropriate caption or title.

Table 6.79 indicates that the skill only emerges at the Std 2 level, increases rapidly from Std 3 (27%) to Std 4 (61%), and levels off in Std 5 (65%). The Std 5 level suggests that pupils are not fully competent in this task at the end of the primary school phase.

TABLE 6.79
PERCENTAGE GROUP PERFORMANCE
(SUB-TEST IV)

STD	1	2	3	4	5
AV %	1	14	27	61	65

N = 50

The average facility value of 0,35 (TABLE 6.80) illustrates the low level of proficiency in the tasks, the facility values for the items range from 0,25 to 0,46. The relatively high discrimination index (0,66) is due, not to high performance in the upper 27%, but to the low scores (1% - 14%) in the lower 27%. Readers in Std 4 - 5 will be relatively competent in this composite, but it needs refinement.

TABLE 6.80
FACILITY VALUE AND DISCRIMINATION (SUB-TEST IV)

ITEM	26	27	28	29	30	31	32	33	34	35	AV
FV	0,46	0,36	0,46	0,32	0,39	0,36	0,29	0,29	0,36	0,25	0,35
D	0,93	0,71	0,79	0,64	0,79	0,57	0,43	0,57	0,71	0,50	0,66

6.3.5.5/..

6.2.5.5 Previewing, Anticipating (Sub-Test V)

In this task, readers are required to guess at the contents of a text from its title. Readers predict the contents. TABLE 6.81 indicates the acquisition is developmental, though its acquisition remains constant through Std 2 and Std 3. The skill is already present at the Std 1 level, and is fairly advanced at the Std 5 level, though not fully mastered. The skill demands imagination, and children's familiarity with fairy tales at an early age may account for its number one ranking for the Std 1 group.

TABLE 6.81
PERCENTAGE GROUP PERFORMANCE
(SUB-TEST V)

STD	1	2	3	4	5
AV %	32	59	59	61	78

N = 50

The facility value of 0,53 suggests the test is at an appropriate level of difficulty, i.e. the items (with the exception of item 41) are at an appropriate level of difficulty and readers have a reasonable chance of making the correct predictions. The discrimination idea of 0,40 suggests, however, that the progression through the standards is below expectation. This accounts for the failure to achieve mastery in the skill at the end of the primary school phase.

TABLE 6.82
FACILITY VALUE AND DISCRIMINATION (SUB-TEST V)

ITEM	36	37	38	39	40	41	42	43	44	45	AV
FV	0,75	0,85	0,61	0,57	0,46	0,02	0,39	0,46	0,54	0,61	0,53
D	0,36	0,29	0,64	0,43	0,50	0,64	0,07	0,21	0,50	0,36	0,40

6.3.5.6/...

6.2.5.6 Understanding Propositional Development (Sub-test VI)

The task demands knowledge of logical development of text, i.e. sensitivity to grammar -- the sentence as entity expressing a proposition. It requires use of general skills of anticipation and prediction at where a sentence starts or ends.

TABLE 6.83
PERCENTAGE GROUP PERFORMANCE
(SUB-TEST VI)

STD	1	2	3	4	5
AV %	9	13	15	33	33

N = 50

TABLE 6.83 acquisition of this skill is very low in Stds 1 - 3 (9% - 15%). Std 4 - 5 readers have a slightly higher proficiency (33%), but even at this advanced primary level, readers have not acquired the skill in adequate quantity to enable him/her to engage actively in the reading process. Readers in the primary school rely on overt cues such as commas and full stops to indicate propositional development. They decode instead of encoding, i.e. comprehension follows rather than precedes recognition of text markers.

TABLE 6.84
FACILITY VALUE AND DISCRIMINATION (SUB-TEST VI)

ITEM	46	47	48	49	50	AV
FV	0,93	0,25	0,43	0,32	0,29	0,44
D	0,14	0,50	0,86	0,64	0,57	0,54

N = 50

The overall ranking at number 7, and the number 6 ranking for Std 5 confirms the conclusion that readers have a deficiency in the skill (TABLE 6.70). Item 46 has a high

FV (0,930)/...

FV (0,93) because readers know that a sentence/passage starts with a capital letter, but it is surprising that they did not infer that the passage would end in a full stop (FV = 0,29). The assumption is that readers found the task too difficult, and abandoned it before they came to the end of the passage.

The discrimination index of 0,54 indicates moderate progress from Std 1 (9%) to Std 5 (33%).

6.2.5.7 Sensitivity to Test Structure and Coherence (Sub-Test VII)

The task involves identification of sentences which do not fit in a paragraph. This requires knowledge of text which do not fit in a paragraph. This requires knowledge of text structure (organization) and coherence. Without this knowledge the reader cannot "make sense" of what he is reading.

TABLE 6.85 indicates this skill emerges at the Std 1 level (10%), develops very slow through Std 2 (22%) to Std 3 (31%), slumps to 19% in Std 4, before it "takes off" in Std 5, but the average 51% attained by this group suggests that, at the end of the primary school phase, readers cannot recognize the theme of a paragraph, follow the logical development (coherence), and eliminate elements that interfere with coherence. The assumption (to be examined in Chapter Seven) is that the deficiency has its roots in lack of directed teaching; readers are not taught to examine text for coherence and logical development. The implication is that readers do not read with comprehension; they reconstruct meaning after words and sentences have been identified, i.e. they decode.

TABLE 6.85

PERCENTAGE GROUP PERFORMANCE (SUB-TEST VII)

STD	1	2	3	4	5
AV %	10	22	31	19	51

N = 50

Readers/...

Readers' difficulty with this task is reflected by its low ranking in the hierarchy of skills acquisition (TABLE 6.7C) it ranks sixth overall, and fifth for Std 5.

The above inference on deficiency in the skill is further supported by the low average facility value of 0,44 (TABLE 6.86). In addition to retarded acquisition (D = 0,40), acquisition is irregular/erractic (TABLE 6.85). This is to be expected if development of the skill is left purely to chance.

TABLE 6.86
FACILITY VALUE AND DISCRIMINATION (SUB-TEST VII)

ITEM	51	52	53	54	55	AV
FV	0,61	0,57	0,18	0,32	0,54	0,44
D	0,50	0,57	0,21	0,50	0,21	0,40

6.2.5.8 Understanding Communicative Value (Sub-Test VIII)

Communicative value refers to functions of sentences or utterances in discourse. Readers must know whether an expression is a statement, a request, an order, an example, etc. to effectively understand the message and react appropriately. In dialogue (Sub-test VIII) illocutionary functions, e.g. scolding, teasing, etc. and perlocutionary acts, e.g. pleased, disappointed, angry, happy, etc. must be inferred (2.52). It is not easy, since speakers (and writers) do not always use performatives; these have to be inferred. A question, for example, may have the status of a command. Proficiency is closely associated with language competence, i.e. the utilization of contextual pragmatic knowledge (2.52).

TABLE 6.87
PERCENTAGE GROUP PERFORMANCE (SUB-TEST VIII)

STD	1	2	3	4	5
AV %	3	17	13	16	17

N = 50

The reader/..

The readers in this study do not reveal an awareness of the subleties of language (TABLE 6.87). The skill only emerges in Std 2 (17%), and fails to develop any further. The Std 5 performance (17%) suggests readers will fail to interpret writer (and speaker) intentions, a deficiency that will lead to breakdown in communication.

Problems with the tasks are reflected in the low average facility value (TABLE 6.88). The discrimination index of 0,24 illustrates the rate of acquisition from Std 1 - Std 5.

TABLE 6.88

FACILITY VALUE AND DISCRIMINATION (SUB-TEST VIII)

ITEM	56	57	58	59	60	AV
FV	0,21	0,25	0,50	0,32	0,11	0,28
D	0,00	0,07	0,71	0,36	0,07	0,24

6.2.5.9 Summary and Evaluation

Analysis of the Afrikaans test scores provides evidence that readers have not acquired the skills necessary for efficient text processing both qualitatively and quantitatively. It is therefore to be expected that the readers will not have acquired the skills in sufficient quantity and quality in English. Whether reading skills are transferred from the mother tongue to the second language are examined below (6.2.6).

6.2.6 Skills Transfer

Since the acquisition of reading skills in the mother-tongue is retarded, i.e. they do not develop at the appropriate level and are therefore not mastered, and erratic, i.e. there is no continuity in progression through the different levels, it can be inferred that transfer of these skills to reading in the second language will not follow a regular pattern. The assumption is tested by comparisons of: (1) performances

of all/...

of all testees in the entire test; (2) performances of all the testees in the corresponding sub-tests; and (3) performance levels of the different class levels.

6.2.6.1 Distribution

The hierarchical distribution for the two tests (APPENDIX XIV A and XIX E) shows that the upper 27% is more accessible to a wider range of readers; it contains readers from Std 3 - 5 (TABLE 6.89).

TABLE 6.89
READERS IN UPPER 27%

STD	1	2	3	4	5
A-TEST	-	-	2	5	7
E-TEST	-	-	-	4	10

N = 14

Three of the Std 5 readers are not in the upper 27%, further evidence that acquisition of reading skills in the mother tongue does not follow a definite development pattern.

The distribution table for the English test (APPENDIX XIX E) indicates that acquisition is more developmental (TABLE 6.89). All the Std 5 readers are in the upper 27%. The developmental pattern is determined by language proficiency; the second language is learned, not acquired. Proficiency is therefore determined by instruction and exposure.

The pattern for the lower 27% is almost identical. All the Std 1 readers are in the lower 27% in both Afrikaans and English. The only difference is that two of the Std 3 readers also fall in this category for the English test, an indication that, for the lower standards, language proficiency is not a determining factor; instruction and exposure to the second language do not have a telling influence yet.

Instruction/...

Instruction and exposure, therefore, are determinant in developmental acquisition of skills. Any deficiency in skills acquisition can be attributed to these two factors.

TABLE 6.90

READERS IN THE LOWER 27%

STD	1	2	3	4	5
A-TEST	10	4	-	-	-
E-TEST	10	2	2	-	-

N = 14

There is strong evidence of skills transfer, however. TABLE 6.91 shows that 71,4% of the readers in the upper 27% for the A- Test are in the upper 27% for the E-Test. TABLE 6.92 shows a similar pattern for the lower 27%.

Further evidence of skills transfer is provided by the perfect correlation for the average scores in the two tests (TABLE 6.91). The lowest correlation for individual readers is 0,94 (Ulrica). The reader also happens to be the last in the ranking for the upper 27% in the E-Test, suggesting that skills transfer and reading proficiency are closely related; the more efficient the reader becomes in reading in his mother tongue, the greater the transfer of the skills to reading in the second language.

Significance at better than 0,5% for the lower 27% is evidence of considerable skills transfer in the lower standards.

TABLE 6.91/...

TABLE 6.91

SCORES OF UPPER 27% BASED ON E-TEST RANKING

TESTEES	E-TEST RANKING	A-TEST RANKING	SCORES FOR E-TEST	SCORES FOR A-TEST
Conrad	1	1	50	51
Shamela	2	8	48	42
Carmen	3	2	45	47
Liesl	3	2	45	47
Vanessa	5	8	44	42
Cynthia	6	13	43	38
Eugene J	6	4	43	45
Angela	8	11	42	39
Gerard	8	16	42	36
Fabian	10	10	40	41
Heidi	11	14	38	38
Nazlie	12	15	36	37
Asraf A	13	19	35	35
Ulrica	14	16	34	36
AVERAGE			41,8	41,7

N = 14

Admittedly, though, there is little skill to be transferred. What is certain, however, is that what little skill there is, it is transferred, though not to the same extent as with more proficient readers. It is significant that two readers low down in the hierarchy (Donovan and Janine) have similar ratings for both tests, viz. 48.

The most significant conclusion that could be drawn from the data is that skills transfer takes place independent of language competence.

TABLE 6.92/...

TABLE 6.92

SCORES FOR LOWER 27% BASED ON E-TEST RANKING

TESTEES	E-TEST RANKING	A-TEST RANKING	SCORES FOR E-TEST	SCORES FOR A-TEST
Oriele	35	45	17	8
Phillistin	38	29	16	24
Crystal	39	29	14	24
Eugene B	40	50	12	6
Rodney	41	45	11	8
Yassiem	41	42	11	10
Bernadette	43	44	10	9
Jill	43	40	10	12
Lucresha	45	41	9	11
Rochelle	45	42	9	10
Nicolette	47	45	8	8
Donovan	48	48	7	7
Janine	48	48	7	7
Harlon	50	33	6	21
AVERAGE			10,5	11,8

N = 14

6.2.6.2 Transfer of Individual/Composite Skills

The relationship between sets of data is established through chi-square distribution, i.e.:

$$X^2 = \frac{(O - E)^2}{E} - N$$

where: O = Observed frequencies
E = Expected frequencies
N = the total of observed frequencies

The greater the discrepancies between the expected and actual frequencies, the larger the chi-square. Significance levels are deduced from probability levels (Roscoe 1969 : 299 - 300)

while overall/...

While overall skills show quantitative evidence of skills transfer, no such evidence emerges for the individual skills or skills combinations (TABLE 6.93). This is explained by the irregular and belated acquisition of the skills. The skill with the highest transfer, viz. understanding synonymy and antonomy has a significance level better than 0,050 or 5% (TABLE 6.93). Inferences that can be drawn from the data is that skills for processing text at the discourse level are not transferred as effectively as those skills that require the manipulation of overt cues. The former are more cognitive in nature and are employed in processing more abstract concepts at levels higher than the word and the sentence.

TABLE 6.93
CHI-SQUARE DISTRIBUTIONS FOR SUB-TESTS

SUB-TEST	X^2	SIGNIFICANCE LEVELS
I	48,3	$p > 0,005$
II	9,6	$p > 0,050$
III	49,8	$p > 0,005$
IV	15,2	$p > 0,005$
V	20,9	$p > 0,005$
VI	68,9	$p > 0,005$
VII	21,7	$p > 0,005$
VIII	50,0	$p > 0,005$

6.2.6.3 Skills Transfer Within Groups (TABLE 6.94)

Analysis suggests that very little if any, transfer of skills takes place within groups. Apart from the Std 3 group, all the groups are at a better than 0,005 (or ½%) level of significance. Readability levels have shown that the skills have not fully developed in the mother tongue; all the readers are at the frustration level.

TABLE 6.94/...

TABLE 6.94

CHI-SQUARE DISTRIBUTION FOR GROUPS

STD	X^2	SIGNIFICANCE LEVELS
1	258	$p > 0,005$
2	50,8	$p > 0,005$
3	158,6	$p > 0,005$
4	102,2	$p > 0,005$
5	211,2	$p > 0,005$

The acquisition of the skills in Std 1 - 2 is still at an elementary level; at least half the skills (Sub-Test IV; VI; VII; VIII) have not yet emerged. The low significance level for transfer to the second language is therefore expected -- skills that do not exist cannot be transferred, and those that have just emerged are not present in significant enough levels to be transferred.

The development from Std 1 - 5 is irregular and haphazard, and because of the belated acquisition of the skills, they do not develop to the fluency level. These are factors that account for the low significance level of transfer.

6.2.6.4 Summary and Evaluation

The following information has emerged from analyses of skills transfer:

- Skills are quantitatively transferred through all the levels of the primary school; skills transfer takes place independent of language competence.
- The extent of quantitative skills transfer is determined by developmental levels of acquisition; the more efficient the readers become in reading in the mother-tongue, the greater (quantitatively) the transfer of the skill in reading in the second language.
- Qualitative analysis provides significance levels below 0,005

for /...

for transfer of skills involving the utilization of overt textual cues at the level of the sentence. Skills involving information processing at the level of the text (discourse processing) have significance levels of>0,010 - 0,050. Skills are more readily transferred in lower-order skills.

- Qualitative analysis does not show any relationship in skills acquisition in the lower standards (1 - 2) because the still-emerging skills have either not stabilized, or have not yet emerged. Transfer of skills follows the same irregular pattern as that for their acquisition. Non-existent skills cannot be transferred.

The theory that reading is "a general power" is true only for quantitative skills. Qualitatively, skills transfer is dependent on level of acquisition; deficiency in reading in the mother-tongue does not produce predictable results. Readers may seem to behave like proficient readers, but fail to process text efficiently.

The analysis provides evidence of serious deficiencies in skills acquisition throughout the primary school, and this in turn has a negative influence on qualitative transfer of skills from the mother tongue to the second language. The next chapter investigates the causes for the deficiencies, and makes recommendations on the findings.

CHAPTER SEVEN
GENERAL CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSION ON FINDINGS

The primary aim of this study is to determine the acquisition of reading skills in English, and their development through the primary school standards. Both the oral and the silent reading data provide interesting information on both acquisition and development.

7.1.1 Oral Reading Miscue Analysis

Miscues (errors) made by readers when reading aloud provide insight into the reading process. Miscue analysis and Chi-Square Statistics show significance levels ranging between $p>0,050$ and $p>0,005$ for the categories graphic similarity, similarity of grammatical function, and syntactic and semantic acceptability. This suggests that development takes place with advance in standard. The percentage miscues with syntactic acceptability (57% for Std 5) and semantic acceptability (61,9% for Std 5) at the level of the sentence and the passage (TABLES 6.38 and 6.44 respectively) suggests this development is, however, not taking place at a rate that will enable the reader to process text effectively at the end of the primary school phase. Pupils therefore enter high school with defective reading ability.

Reading deficiency is also evident in reading in the mother-tongue. Although miscues with syntactic acceptability indicate very little transfer takes place from Afrikaans to English ($p>0,900$, TABLE 6.40), the significance levels of $p>0,250$ for miscues with similar grammatical function (TABLE 6.37) and $p>0,050$ for miscues with semantic acceptability (TABLE 6.46) suggest that considerable transfer takes place from Afrikaans to English. The reading skills are deficient in English because they have not developed adequately in the first language. The deficiency is more evident at the higher levels, viz. the syntactic and the semantic levels.

The analysis/...

The analysis of data for silent reading takes a closer look at the acquisition and development of those skills which are crucial to text processing, as identified by, inter alia, Kennedy (1981), Grellet (1981), and Harri-Augstein, et al (1982).

7.1.2 Silent Reading

The skills under investigation are: global skills (Sub-test I); understanding synonymy and antonomy (Sub-test II); understanding cause and effect relationships (Sub-test III); scanning, referring and synthesizing (Sub-test IV); previewing and anticipation (Sub-test V.); understanding propositional development (Sub-test VI); understanding text structure and coherence (Sub-test VII); and understanding communicative value (Sub-test VIII). See APPENDIX XVII E for the test battery.

The significance level of $p > 0,005$ for the whole test suggests that development does take place with advance in standard (TABLE 6.69). However, the average percentage per standard for all the sub-tests suggests the readers are at the frustration level, i.e. below 70% (See Singer and Donlan 1980 in 6.3). Std 5, for example, has an average percentage of 53,38% for the whole test.

What is obvious, too, is that some skills, viz. scanning, referring and synthesizing; understanding cause and effect relationship; and understanding communicative value do not emerge until the Std 2 level. All the skills, except for the anticipating in global skills, develop later than normal. "Normal" is taken as the stage at which Kennedy's (1981) children acquire the specific skill. See TABLE 7.1 below for a comparison between Kennedy's children and the children in this study.

TABLE 7.1/...

TABLE 7.1

ORDER OF SKILLS ACQUISITION

SKILL	READERS IN PRESENT STUDY	READERS IN KENNEDY'S STUDY	BACKLOG
Inferring word meaning	Std 1	Std 1	-
Understanding cause and effect relationships	Std 1	Grade 1	2 years
Anticipation	Std 1	Grade 2	1 years
Previewing	Std 2	Grade 2	2 years
Sensitivity to text	Std 2	Grade 2	2 years
Predicting	Std 3	Grade 2	3 years
Understanding communicative value	Std 3	Grade 2	3 years

The backlog in skills development has serious implications. If skills do not develop at the appropriate level, it is highly unlikely that readers will develop into effecient readers. The Std 5 readers in this study have an average age of 12 years 7 months (APPENDIX I C), which suggests they are at the critical stage of cognitive development, i.e. puberty.

Compared with the acquisition and development of these skills in Afrikaans, it is obvious why they are deficient in reading in the second language. Their development in the former reflects development in the latter, except that reading in Afrikaans shows little development ($p > 0,10$ -- TABLE 6.52). Further, the significance level of p 0,005 for individual skills in the two languages (TABLE 6.93) suggests little transfer takes place from Afrikaans to English; skills that are lacking cannot be transferred, and those that have just emerged and not stimulated are not present in significant enough levels to be transferred.

7.2/...

7.2 FACTORS INFLUENCING READING FAILURE

There is a need to relate findings to causes; possible factors include: (1) the syllabus; (2) teacher-training programmes; (3) teachers' perception of the reading process, and the methods they employ; (4) text books; and (5) reading in the society.

7.2.1 Reading and the Syllabus

A syllabus is "partly an administrative instrument, partly a day-to-day guide to the teacher, and partly a statement of what is to be taught and how, sometimes partly a statement of approach" (Strevens 1977: 25). The "what" focuses on the selection and sequencing of data, and the "how" is concerned primarily with the theoretical assumptions about how the mind processes and sorts linguistic data and their practical ramifications. This implies that both content and method take cognisance of the cognitive development of the learner. A study of the syllabus used in schools for Coloured Children, looks at clarity of statement on reading (definition, aim, content) and guidelines pertaining to its instruction.

In the primary school (Sub-Standards A and B, and Std 1), the long-term aim of reading is mastery of techniques which will enable the reader to read with "some meaning" (Guide: Junior Primary Education). The more immediate objectives include attempts "to cultivate the right attitude ... to 'Reading' (and) ... to 'Teaching Reading' (P.24).

Reading is defined as a technique, suggesting it is a mechanical skill, denying its active psycholinguistic nature. The development of the technique is strengthened by sound groupings and word analysis via Phonics and Spelling Methods. Comprehension is not of primary importance since the emphasis is on recognition. The reader is taught "to derive some meaning from the portion read". Comprehension is described

in vague/...

in vague terms which cover a range of skills. This vagueness, and its secondary nature, is confirmed by the phrase "some meaning". The derivation of meaning also suggests that meaning follows, rather than precedes, meaning. Reading is perceived as a mechanical skill of word recognition as opposed to the meaning-centredness of process models. Process models regard meaning as central; it precedes recognition, and the development of sensitivity to the text, predicting, anticipating and sampling, coupled with prior knowledge of language and the world contribute towards effective reading.

For the Senior Primary School (Std 2 - 4), the guidelines pertaining to Oral Reading are the same as those for the Junior Primary phase; the emphasis is on phraseology, intonation, stress, etc. (Onderwysbulletin P2/82). The continued precedence of mechanical skills over processing skills indicates no progression towards information processing is instructionally stimulated. In this regard, the syllabus does not pay adequate attention to cognitive development; the guidelines for Stds 3 - 4 remain unchanged.

Silent reading is introduced in Std 2. Reading speed, skimming, use of tables of contents (previewing), and use of reference works are listed. Unfortunately, there is no extention and expansion to subsequent standards. This lack of continuity is one factor that contributes towards the lack of acquisition of skills, and their retarded development.

In teaching reading in the second language, the syllabus follows the same pattern as for the mother-tongue (Education Bulletin P5/8). The only difference is that instruction starts in Sub-Standard B. Silent reading is introduced for "specific attention" in Std 2, attention that is stressed increasingly in Stds 3 - 4. In addition to silent reading, reading comprehension also gets honourable mention, but is regarded as additional "activity". Comprehension is regarded as a language aspect which is independent of silent reading. Random questions are often set on a text without due

consideration/...

consideration for the development of specific skills. The questions concentrate mostly on retrieval of information. The syllabus, through its vagueness and confusing terminology, fails to give direction towards a developmental skills programme.

7.2.2 Reading and the Teacher-Training Programme

Reading, like Oral Work, Written Work, etc. is regarded as a purely language aspect by the syllabus, and subsequently the teacher and the pupils. It therefore features only in language teaching and, throughout the primary school, is not regarded as the medium through which information is processed in the study of other subjects in the curriculum. Consequently, reading and the problems associated with it, are the concern of the language teacher only.

Reading has been identified in one college, viz. Dower College (Port Elizabeth), as an area which presents problems. Language departments are energetically searching for a more acceptable model for reading instruction. The researcher has taken part in a number of discussions on whether reading instruction should be restricted to oral reading and the development of word attack skills only, or whether it should be extended to include silent reading and the development of specific skills necessary for effective text processing. A reading specialist from Rhodes University was called in to settle the dispute, but attempts to give direction towards skills-centredness have met with skepticism, and have been shot down by one arch-traditionalist as the propagation of foreign ideology!

Materials for the reading lesson are restricted to class readers. Newspapers, magazines and library books are materials for extensive reading in the class library. Reading across

the curriculum/...

the curriculum is not encouraged in primary school instruction. In fact, the pupils need never read texts in other subjects such as history and science since the teacher reads and interprets the "facts" and supplies the "readers" with notes (summaries) in tabulated, simplified form and in the form of questions and answers. Yet each pupil is issued with a text book. See 7.2.4 for a discussion of materials.

The presentation of the reading lesson concentrates on oral reading (See 7.2.3 for lesson description). A measure of variety is introduced with the use of visual teaching aids such as pictures, transparencies, films, flash-cards, etc. Though these may increase or sustain interest in a familiar activity, ability to process written text is not developed.

The teacher-training programme is one factor which contributes towards reading failure since it fails to expose the trainee to methods aimed at skills development. Worse still, the failure of lecturers to commit themselves to a developmental skills model of reading causes uncertainty in the trainees, and subsequently a tendency to avoid teaching the reading lesson.

7.2.3 Teachers' Insight into the Reading Process, and Methods Employed

Reading, according to recent research, is regarded as a psycholinguistic process in which the reader reconstructs the text by previewing, predicting, sampling of cues and checking hypotheses (Kenneth Goodman 1981; Frank Smith 1978). The theory was tested on a group of 35 in-service teachers who attended a workshop on reading instruction in July 1984. They completed a questionnaire (APPENDIX XXI) which consists of twenty-five questions on reading.

Predictably/...

Predictably, the majority of the respondents view reading merely as word recognition. For example, 34 out of the 35 agreed with the statement that learning to read means learning to associate written words with spoken words (Statement 2). Reading is regarded as an accurate, linear activity. For example, 26 agree with the statement that children should focus first on spelling-to-word correspondences, then on words, last on phrases and clauses (Statement 7).

The active nature of the reading process is denied. For example, 23 believe that "to read is essentially a matter of mastering certain skills (mechanical); meaning will follow automatically after this" (Statement 9).

Another aspect of the active process is predicting what is to come. Lanham (1985:6) says:

> The competent reader creates such expectations ... from cues coming from words, structures and meanings which themselves predict the words, structures and meanings that lie ahead.

The teachers in the study disagree with the above aspect; 30 disagreed with the statement that, "Children should be encouraged to guess at the contents of the text even before they have read it" (Statement 20). This confirms their response to Statement 17: More than half the respondents disagree that, "Children should not be encouraged to predict what they have not yet read since they will not concentrate on what they are reading at any particular time." The reader is therefore not encouraged to interact with the text.

For a reader to be effective in his processing of text, he needs to interact with it. He must bring his own experience to the text. Lanham (1985:6) says that:

> The competent reading of a text begins with efforts to locate what is believed to be in the text in the context of previous experience.

This creation/...

> This creation of background to the text using prior knowledge of the world, is maintained as reading processes in order to produce representations of anticipated meaning. Information coming from the reading of the text feeds into a mentally constructed schema constructed on the basis of previous experience of similar events, routines, etc.

The reader who brings his experience to the text responds to it. This subjective nature of the reading process is denied by the responses of the teachers in the study. 24 of the respondents agree with the statement (number 18) that, "Children should be taught to be objective, that is, they must not allow their own experience to interfere with the meaning of the text/study". This view of reading does not encourage the development of critical ability.

Knowledge of the language forms part of this "knowledge of world". The effective reader utilizes the context (written cues) to arrive at the theme if it is not explicitly stated, and the meaning of words and expressions. The respondents discourage this. For example, 21 disagree with the statement (number 19) that, "When children are confronted with an unfamiliar word, they should be encouraged to guess at its meaning instead of consulting a dictionary first". Children are thus not encouraged to utilize contect to infer meanings of words. Hence the agreement (to Statement 13) by 29 of the respondents that, "Unfamiliar words should be discussed before the reading starts". The words are taken out of context and discussed in islotation.

The response to Statement 13 illustrates that beliefs about reading influence approach. Observation of classroom practices both at the (Dower) training college and the primary schools in Port Elizabeth under the administration of the Department of Education and Culture (Coloured Education) has revealed that reading instruction through the standards

concentrates/...

concentrates on word attack skills. The reading lesson presentation follows the following steps:

1. Five or six unfamiliar words are written on the chalk board. Variations include presentation of the words on flash-cards and transparencies.
2. Children are asked to give the meanings of the words.
3. The meanings of the words (if unknown) are looked up in the dictionary. Some class readers give a list of words and their meanings.
4. The children are then asked to use the words in sentences.
5. The teacher reads aloud a paragraph (or two) as a model for the children, paying special attention to pronunciation, enunciation, phrasing and intonation.
6. The class as a whole or a groups reads a paragraph or two in unison.
7. Children read individually. (The reading is immediately interrupted when a miscue is made.)
8. The teacher asks questions on the content of the story.

The lesson presentation outlined above is standard practice throughout the primary phase in all the schools observed. Silent reading is sadly neglected, and its practice lacks systematic presentation. It is usually assigned to a time slot every second week in a Book Education period. The child is allowed to read library books while the teacher is employed in class library and other administration. The only check on the child's reading is the number of books "taken out". In oral lessons he may be asked to retell the story. Sometimes the pupils are asked to write a summary of the story read, but in most cases this makes unwelcome demands on the teacher. The writing of a summary remains an ideal, and this is what is expressed by the response to Statement 24, "Children should be encouraged to make summaries of longer texts they have read". This leads to the conclusion that, after the child has

learned to/...

learned to read in the Junior Primary stage, he is not taught any new skills. Skills that develop are not instructionally stimulated, and develop on their own.

7.2.4 Reading Materials

As already stated above, the only monitored reading that takes place in the schools observed involve the class reader. What is monitored is the readers' mastery of the vocabulary, recognition, and the rest of the word attack skills. Newspapers, magazines and library books are additional recommended materials, but their use is not methodically implemented -- see reference under 7.2.3.

The use of class readers (with teachers' handbook) is a useful exercise for beginning teachers, and it approximates the pupils' level of competence in spoken language. Wright (1972:83), however, lists criticisms that seem to outweigh the advantages. His criticisms of basal readers involve lexical and sociological considerations, viz:

- Basal readers are not always at a uniform level of word difficulty.
- No one series of basal readers can provide appropriate reading experiences for all pupils in a given class.
- There is no evidence of a sequential development of reading skills.

Class readers only are therefore not adequate reading material for effective stimulation and development of reading skills. The very nature of the purpose for which they were constructed, viz. promoting word attack skills in narrative contexts implies they are not intended to be communicative; the affective or subjective element of reading is not catered for by the texts.

Text prescribed/...

Texts prescribed for content subjects, viz. history, geography, science and health education, also have shortcomings. They often lack cohesion and coherence, e.g. the extract from a Std 5 science text book:

1. The information is not presented in continuous prose. Isolated, though related, facts give the impression from their listing that the book is a note book and that the exercise is designed for easy memorization.
2. Points 1 and 2, though part of one punctuated sentence, do not contain related propositions.
3. Point 5 leads nowhere.
4. Point 8 is a restatement of point 6, but this is not indicated, and the reader may regard point 8 as new information.
5. Point 7 is a distractor, and its intrusion between two equivalent statements make it parenthetical.

Below the given text in APPENDIX XXII is a reconstructed version of the analysed text in which cohesion and coherence is restored. In order to follow the original text, the reader has first to establish its cohesion and coherence -- a complex process for primary school readers. Responses to Sub-Test VII (APPENDIX XII and XVII) have shown that readers are not capable of performing such tasks. The result is that the seemingly simplified manner in which scientific facts are given does not encourage understanding of logical development of propositions, and memorization is a final resort.

> Lanham (1985:9) blames their shortcoming on:
> ... erroneous beliefs regarding the simplification of text ..., a commitment to drill-like repetitions as a teaching technique, and, regrettably, obvious haste in preparation ...

It is obvious that prescribed reading materials are not designed to stimulate the acquisition and development of

reading skills, and could therefore be regarded as one of the major contributors towards reading failure.

7.2.5 Reading in the Society

Various studies have proved that children from an environment where books form an important part become better readers and higher achievers in school than children who have not been exposed to books. Constance Weaver (1980:260 - 261) observes:

> Children are even more advanced in their reading by the time they enter school, having followed along in books as people read to them or as they listened to a record or tape recording ... In short, the "natural" readers have usually been immersed in the written language, and they have usually had someone to assist them in their individual exploration of the relation between spoken language and written language.

The children in this study come from a predominantly working-class community, and it can be assumed that books do not play a significant role in the home. Seven children from the area were questioned about the reading habits in their homes. Six said they did not have a library, but the fathers of all the children bought the evening newspaper. The children then read the television programmes and the comics. No one of them remembers their parents reading to them, although they remember their mothers telling them stories. Their first introduction to reading was at school.

TABLE 7.2 below illustrates the reading behaviour of the community in which the school where the research was done, is situated. The population figures were released by the Department of Housing. The school pupulation is the approximated enrolment in the 10 primary schools and the 2 senior secondary schools in the area. The library statistics were provided by the Library Section for the area.

TABLE 7.2/...

TABLE 7.2

LIBRARY UTILIZATION BY ENTIRE POPULATION

	Population	Registered Members	Books in Stock	Book Loans Per Day
Adults	17 064	3 325	7 935	254
School Children	12 000	5 251	7 658	280
	39 064	8 576	15 593	534

The statistics show that the society is not a "reading" society: 19,5% of all adults, and 43,8% of all school children (22% of the community) are members of the library. The library itself would not be able to cope with an increased readerhsip. For example, each registered number has an allocation of an average of 1,5 books. Lack of support from parents therefore accounts for much of the reading failure of the children.

7.2.6 Summary

The deficiencies in reading skills can be attributed to the following factors:

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.

These are some of the more potent factors which account for education failure at the high school and university.

7.3/...

7.3 RECOMMENDATIONS

The following recommendations are made to correct failures of reading in school.

- A reading policy should be formulated which would involve all the content areas in the curriculum in the development of skills needed for learning in the specific areas. Reading would cease to be the sole concern of the language teacher. Reading-accross-the curriculum would involve the whole school. A position of administrator should be initiated at each school and the duties would include supervision of the implementation of policy by the different departments, co-ordination of instruction to keep overlapping to a minimum, keeping staff informed on recent studies and research, provision of appropriate materials, and constant reviewing of the needs of the pupils.
- Syllabuses for levels above the junior primary phase should be more specific in their definition of reading, its component skills, and their development. The active nature of the reading process should be stressed, as well as the strategies employed by effective readers to gain access to meaning, which is the centre of the process model (FIG. 2.4). A skills inventory should be provided, together with a natural order of acquisition (Kenndy 1981). This implies a shift away from a concentration on word attack skills.
- All institutions of higher education would urgently embark on intensive reading programmes aimed at wiping out the developmental backlog. In-service orientation courses should be conducted for entire staffs of schools. Developmental reading programmes should be "sold" to members who find it difficult to divert from a long-accepted course.
- Materials currently in use should be supplemented. Melnik and Merrit (1976:16) suggests, inter alia,

the/...

the following:

- Pupils should have access to all types of reading materials relevant to the topic they are studying: reference books, newspapers, periodicals, cuttings, documents, stories, biographies.
- Pupils should have the opportunity to observe the varied emphases, commitments, attitudes and presentation of different writers.
- Text books should not be treated as sacred sources of irrefutable data, but rather as one of many sources of handy reference. For the study of some topics the school text book may well be dispensed with.

- Studies should be conducted of developmental programmes implemented in American and British institutions, and, if necessary, adapted for local application.
- Publishing houses should appoint specialists as consultants who will make recommendations to text book writers with the aim of promoting an orientation towards process-centredness and skills development.

Unless the recommendations are urgently acted on, failure will continue to be a prominent feature of education.

7.4 LIMITATIONS OF THE PRESENT STUDY

The present study has several shortcomings which should be taken into account when similar studies on skills acquisition are conducted:

- The tests are not standardized and need refinement. Two of the sixty items in the English Silent Reading test discriminate negatively (TABLE 6.74). These have to be replaced. The reliability index for the whole test (APPENDIX XIX E) suggests, however, that these items do not affect findings adversely.
- The sub-tests consistof 4 x 5 and 4 x 10 items (TABLE 5).

The number/...

The number of test items per sub-test should be increased to at least 25 for more realiable results. The test would, however, be too long to administer at one sitting. This would necessitate conducting the tests over several days and coping with such extraneous factors as school time-tables, availability of testees, etc.

- The Afrikaans and English Oral Reading texts generated too few miscues from the Std 4 and 5 readers (APPENDIX VI/A.4 and VI/A.5; IX/E.4 and IX/E.5). A text should be selected which has the potential of generating a minimum of 25 miscues (Kenneth Goodman 1973). The text should, however, still be "readable" to Std 1 - 3 readers.
- The test population of 10 in each group level should be increased to at least 30, the number regarded by many researchers as the minimum (Cohen and Manion 1980:77). In this case, pupils in the same performance bracket would have had to be co-opted from other schools. This would have introduced environmental and instructional factors which would have interfered with reliability of results.
- The test should be administered to the same groups the next year in order to confirm findings. The problem, however, is that the pupulation slips away. The Std 5's move on to different high schools in and outside Port Elizabeth, and pupils in the lower grades often do not return to the same school.

APPENDIX 1A : COMPREHENSION TEST ADMINISTERED TO DE I STUDENTS

INSTRUCTIONS:

1. Read the following extract carefully
2. For each blank select ONE choice that is most natural and accurate
3. Choose only ONE answer for each question
4. Ring the letter of the correct answer on the question paper

---

There are tough-shelled submarines which have the capacity to withstand crushing water pressure; they also contain self-sustaining support systems which make it possible for crews to set up housekeeping for weeks or months on the ocean floor.

New techniques and tools, which 10 years ago would have been considered in the realm of "science fiction," increase the efficiency and effectiveness of the observation of vessels as they explore the ocean depths. Dolphins, for example, have been trained to perform simple errands that vehicles cannot perform well. Unmanned vessels are sent to collect data and samples. Medical science has conceived of gradually saturating the bodies of aquanauts with oxygen and nitrogen to neutralise water pressure so that they can swim at depths which ordinarily would require bulky pressurised suits.

The benefits that accrue from mastering the seas include untold archaelogical treasures, vast resources of oil and mineral wealth, and, most important, sources of food and fresh water.
Mountains higher than any in our air-filled world will be explored, Black valleys untouched by sunlight will be mapped, and life forms never before seen by man will be discovered. And like the initial ventures into space, much of the excitement and many of the rewards in undersea exploration center around the know how and bravery involv in just getting there.

1 In line 14, the word "mastering" means -------
A to become captain of
B to hold a university graduate degree
(C) to bring under control or overcome
D to become an owner of

2 In line 14, the word "benefits" means _____.
A efficiency
(B) rewards
C resources
D exploration

3/....

3. "....they also contain self-supporting systems which make it possible for crows to set up housekeeping for weeks or months on the ocean floor." This means they _____.
   a contain houses to be built on the ocean floor
   b contain crews that will clean and cook
   (c) have equipment to keep the crew alive
   d have systems that will help to build houses on the ocean floor

4 "Unmanned" in line 9, means _____.
   a with aquanauts only
   b without a crew
   c with a female crew
   d with trained dolphins only

5 What will be the most important benefits gained from exploring the oceanfloor? It is _____.
   a mastering the seas
   b vast resources of oil and mineral wealth
   c untold archaeological treasures
   (d) sources of food and fresh water

6 From the article it is clear that exploration of the ocean depths can be done by _____.
   (a) submarines, dolphins and aquanauts
   b water pressure and support systems
   c medical science
   d the realm of "science fiction"

7 In line 21, the "know-how" refers to _____.
   a science fiction
   b observation
   c medical science
   (d) techniques

8 In line 12, "they" refers to _____.
   a scientists in the medical field
   b unmanned vessels
   (c) aquanauts
   d oxygen and nitrogen

9./.....

APPENDIX 1A CONT.

9. What kind of samples would the unmanned vehicles collect? They are _____.

a objects thrown into the sea
b photographs of the ocean bed
c maps of mountains and valleys
(d) rocks, sand, plants and animals

10 A good title for this article might be _____.

a Four Ways of Mastering the Seas
b The Role of the Submarine in Undersea Exploration
(c) A World under the waves: how to get there and why
d Secrets of the ocean depths

TOTAL : 10 marks

APPENDIX 1B HIERARCHICAL FREQUENCY DISTRIBUTION, STANDARD DEVIATION AND RELIABILITY

TESTEE	NO	SCORE	TESTEE	NO	SCORE
Crystal A	19	10	June	52	6
Larry	54	10	Mark H	59	6
Rodrique	81	10	Monty	68	6
William	97	10	Nolene B	72	6
Bernard A	9	9	Windsor	98	6
Craig	18	9	Yvonne	99	6
Denver	23	9	Astrid	4	5
Donovan	29	9	Benjamin	6	5
Farouk	33	9	Bernard P	11	5
Mark T	61	9	Charmaine	16	5
Mavis	63	9	Colleen	17	5
Nathan	69	9	Crystal E	20	5
John W	50	9	Deon	24	5
Josephine	51	9	Don	28	5
Rashieda	78	9	Felicity	35	5
Shane	85	9	Margaret	58	5
Ursula	91	9	Mervyn	65	5
Walton R	95	9	Michael D	83	5
Wayne	96	9	Petronella	76	5
Alfreda	1	8	Richard	80	5
Fernando	34	8	Athie	5	4
Gavin	39	8	Brenda	12	4
Isaac	43	8	Carol	14	4
Joan	46	8	David	22	4
John V	49	8	Derek I	25	4
Kalina	53	8	Harriet	41	4
Mark L	60	8	Laura	55	4
Mary	62	8	Noleen G	71	4
Nicolette	70	8	Portia	77	4
Pedro	75	8	Ronald	83	4
Selwyn	84	8	Vanessa	92	4
Tersia	90	8	Arnel	3	3
Dianne	27	7	Berenice T	8	3
Gabriel	30	7	Bernadette	9	3
Godfrey	40	7	Carmen	13	3
Jan	44	7	Eva	31	3
Jean	45	7	Johannes	47	3
John B	48	7	Patrick M.	74	3
Lucian	56	7	Sina	87	3
Magdalene	57	7	Sharon	86	3
Melanie	64	7	Suzette	89	3
Michael K	67	7	Gail	38	2
Raymond	79	7	Patrick L	73	2
Roma	82	7	Stanley	88	2
Vernon	93	7	Daphne	21	1
Walton	94	7			
Yul	100	7	ΣN	=	619
Allison	2	6	m	=	6,19
Berenice	7	6			
Cecilia	15	6			
Derrick K	26	6			
Enica	30	6			
Faith	32	6			
Freek	36	6			
Iolanthe	42	6			

Standard Deviation

Score	d	d^2
10	3,81	14,52
9	2,81	7,90
8	1,81	3,28
7	0,81	0,66
6	-0,19	0,04
5	-1,19	1,42
4	-2,19	4,80
3	-3,19	10,18
2	-4,19	17,56
1	-5,19	26,94
		87,30

$$s.d = \frac{87,30}{100}$$

$$= 0,873$$

$$= 0,93$$

Reliability : $r_{11} = \frac{N}{N-1}\left(1-\frac{m(N-m)}{Nx^2}\right)$

$$= \frac{100}{100-1}\left(1-\frac{6,19(100-6,19)}{100 \times 87,30}\right)$$

$$= \frac{100}{100-1}\left(1-\frac{6,19(93,81)}{8730}\right)$$

$$\frac{100}{99}\left(1-\frac{580,68}{8730}\right)$$

$$= 1,01\ (1-0,07)$$

$$= 1,01\ (0,93)$$

$$= \underline{0,939}$$

APPENDIX 1 C: EXTENDED ITEM ANALYSIS

U = UPPER 27% M= MIDDLE 46% L=LOWER 27%
F.V.= ITEM DIFFICULTY (FACITY VALUE)
D= ITEM DISCRIMINATION

ITEM NO	U	M	L	TOTAL %	
1 A	0	0	2	2	
B	0	1	2	3	
* C	* 27	*40	*18	*85	F.V.= 0,83
D	0	5	5	10	D = 0,33
2 A	0	4	4	8	
*B	*24	*35	*12	*71	F.V. = 0,67
C	2	5	7	14	D = 0,44
D	1	2	4	7	
3 A	0	0	2	2	
B	0	6	11	17	F.V. = 0,65
*C	* 27	*34	*8	*69	D = 0,70
D	0	6	6	12	
4 A	0	5	11	16	
*B	*26	*37	* 6	*69	F.V. = 0,59
C	0	0	1	1	D = 0,74
D	1	4	9	14	
5 A	4	6	8	18	
B	0	2	1	3	F.V. = 0,67
C	0	2	5	7	D = 0,37
*D	*23	*36	*13	*72	

ITEM NO	U	M	L	TOTAL %	
6 *A	*23	*23	*4	*50	
B	0	7	5	12	F.V. = 0,50
C	2	6	4	12	D = 0,70
D	2	10	14	26	
7 A	1	5	8	14	
B	1	2	4	7	F.V. = 0,70
C	0	4	1	5	D = 0,41
*D	*25	*35	*14	*74	
8 A	1	12	6	19	
B	1	8	5	14	F.V. = 0,61
*C	*25	*24	*8	*57	D = 0,63
D	0	2	8	10	
9 A	0	5	5	10	
B	1	26	12	39	F.V. = 0,59
C	2	6	2	10	D = 0,60
D	*24	*9	*8	*41	
10 A	2	7	3	12	
B	5	7	8	20	F.V. = 0,33
+C	+16	+13	+2	*31	D = 0,52
D	4	19	14	37	

APPENDIX II A: GROUP AGES ON 31 MARCH 1985

STD 1	Age
Bernadette	8y 3m
Donovan	9y 2m
Eugene	9y
Janine	8y 4m
Jill	8y11m
Lucresha	8y 3m
Nicolette	9y
Rochelle	8y 6m
Rodney	10 1m
Yassiem	9y 2m
Average	8y10m

STD 2	Age
Bassidine	10y 2m
Benito	9y 7m
Beryl	9y 5m
Carol	10y 3m
Harlon	9y 6m
Jessica	9y 7m
Lyndon	9y 9m
Madelein	9y 7m
Marilyn	9y 7m
Oriele	10y 2m
Average	9y 9m

STD 3	Age
Ashraf W	10y 7m
Carmen	10y 6m
Crystal	9y 11m
David	13y 10m
Donovan	11y 2m
Errol	10y 5m
Gaynor	10y 1m
Lettie	14y 11m
Penelope	9y 10m
Phillistene	10y 5m
Average	11y 2m

STD 4	Age
Angela	11y 4m
Charmaine	11y 7m
Conrad	10y10m
Cynthia	11y 3m
Gerard	11y 3m
Gillian	11y11m
Gustin	11y10m
Marius	11y 6m
Ramleigh	15y 2m
Sihaam	11y 7m
Average	11y10m

STD 5	Age
Asraf A	12y 9m
Carmen	12y 2m
Eugene	13y 2m
Fabian	12y 1m
Heidi	14y 2m
Liesl	12y 6m
Nazlie	12y 6m
Shamela	12y 6m
Ulrica	11y 11m
Vanessa	12y 5m
Average	12y 7m

APPENDIX IIB: GROUP PERFORMANCES IN EXAMINATION NOVEMBER 1984

STD 1	%
Eugene	93,6
Sandam	92,2
Lucresha	92,2
Rochelle	91,6
Janine	88,9
Jill	88,9
Nicolette	88,9
Bernadette	88,2
Donovan	87,7
Rodney	87,1
Average	89,93

STD 2	%
Beryl	87,5
Madelein	85,1
Benito	82,5
Marilyn	80,8
Lyndon	80,5
Bassadine	79,6
Harlon	79,0
Jessica	78,3
Carol	77,1
Orielle	77,1
Average	80,75

STD 3	%
Ashraf	88
Gaynor	85,7
David	83,5
Penelope	80,5
Crystal	79,7
Lettie	79,2
Carmen	77,2
Errol	77,2
Donovan	76,5
Phillistene	76,5
Average	80,40

STD 4	%
Conrad	89,5
Angela	83,8
Cynthia	80,6
Gustin	80
Charmaine	79,8
Gerard	79,4
Sihaam	79,2
Ramleigh	76,6
Gillian	75,4
Marius	75
Average	79,93

STD 5	%
Carmen	86,4
Liesl	81,3
Ulrica	76,1
Nazlie	74,6
Vanessa	73,6
Eugene J.	73
Fabian	72,4
Shamela	72,4
Heidi	71,5
Asraf A	70,1
Average	75,14

APPENDIX IIIA: AFRIKAANS TEKT

DIE BOERVROU

Dis 'n somerdag in die Laeveld van Transvaal. In die groot sitkamer van oom Piet Cronje se plaashuis sit 'n klomp gaste wat uitgenooi is om die middag daar te kom eet. Hulle gesels oor alles- oor die weer, oor die koedoe wat in 'n motor vasgehardloop het en oor die moed van sommige mense.

"Ek dink," sê Jan Rabie, "dat 'n dogter en 'n vrou oor die algemeen minder moed as 'n seun en man het. As daar groot gevaar is, sal 'n man dink en iets doen, maar 'n meisie? Sy spring op 'n stoel, skree benoud ' O!...O-O!..O-O-O! en dit is sover sy kom."

"Dis nie waar nie," antwoord meer as een dame, maar net toe lui die etensklok. Die gaste stap na die ruim eetkamer waar hulle om die groot tafel aansit. Terwyl die ete aan die gang is, roep mev. Cronje haar seun van so nege jaar en sê saggies vir hom: "Boet, gaan haal 'n bakkie melk in die kombuis en sit dit op die stoep hier by die eetkamer se buitedeur neer."

Kaptein Sadie wat langs mev.Cronje sit, dink dadelik dat daar êrens 'n slang moet wees. Hy weet dat mens hulle met melk na sekere plekke toe kan lok. Hy loer ongemerk rondom hom, maar hy gewaar niks. Toe word hy skielik bang. Hy kyk met kwaai oë na die gaste en sê hard: "Vriende, sit doodstil ! Ek is 'n kaptein in die leër. As ek beveel, moet my soldate gehoorsaam. Nou, nie een moet beweeg voor ek driehonderd getel het nie. Die persoon wat nie my bevel uitvoer nie, beboet ek met twintig rand."

Voordat die mense verstaan wat eintlik aan die gang is, begin hy tel: een..twee..drie...honderd - en- ee, ...honderd-en-tagtig." Die kaptein se gedrag is baie eienaardig, maar almal kyk na

sy ernstige/....

sy ernstige gesig en geeneen verroer 'n spier nie. Hy tel nog altyd stadig verder: "twee-honderd-en-drie..tweehonderd-en-sestig, ...tweehonderd een-en-sewentig..tweehonderd-en-tagtig..tweehonderd nege-en-tagtig."

Toe sien hulle skielik die groot slang wat onder die tafel uit na die bakkie melk toe op die stoep seil.

"Nou verstaan ek," sê een van die gaste, "waarom kaptein Sadie met sy ernstige speletjie begin het."

"Ja," antwoord 'n tweede, "as hy nie so gou gedink het nie, kon die reptiel een van ons gepik het."

Toe staan oom Frans op en vra: "Het julle daaroor gedink dat ons netnou oor moed van mans en vroue gepraat het? Ons het gesê 'n dame spring op 'n stoel en skree as sy skrik. 'n Man, aan die ander kant, doen die regte ding. Hier het ons 'n klinkklare bewys. Kaptein Sadie het die gevaar gesien en presies geweet hoe om te handel. Geluk, mnr. Sadie, en baie dankie."

Onder handeklap staan Kaptein Sadie op en sê: "Oppas, moenie te gou praat nie, vriende. Ek is bevrees iemand anders moet die eer kry van wat hier gebeur het."

Toe draai hy na mev. Cronje en praat met haar: "Mevrou, ek het gehoor u stuur u seun om die melk op die stoep te gaan neersit. Dit het my laat dink dat hier 'n slang is, maar hoe het u geweet dat hy onder die tafel is? Sê vir ons."

Mev. Cronje bloos so effens voor sy skamerig antwoord: "Wel, ek het gevoel hoe hy hom op my linkervoet tuis maak."
"Nou to nou!" roep kaptein Sadie verbaas uit. "Onthou,mev. Cronje het nie 'O!....O-O! O-O-O' gegil nie. Die vroue wen.

APPENDIX IV A1: AFRIKAANS TEXT - CODING SHEET

DIE BOERVROU

[1]Dis 'n somerdag in die Laeveld van Transvaal. [2]In die groot sitkamer van oom Piet Cronje se plaashuis sit 'n klomp gaste wat uitgenooi is om die middag daar te kom eet.[3]Hulle gesels oor alles - oor die weer, oor die koedoe wat in 'n motor vasgehardloop het en oor die moed van sommige mense.

[4]"Ek dink," sê Jan Rabie, "dat 'n dogter en 'n vrou oor die algemeen minder moed as 'n seun en 'n man het. [5]As daar groot gevaar is, sal 'n man dink en iets doen, maar 'n meisie? [6]Sy spring op 'n stoel, skree benoud " O!....O -O-O!" en dit is sover sy kom.

[7]"Dis nie waar nie," antwoord meer as een dame, maar net toe lui die etensklok. [8]Die gaste stap na die ruim eetkamer waar hulle om die groot tafel aansit. [9]Terwyl die ete aan die gang is, roep mev. Cronje haar seun van so nege jaar en sê saggies vir hom: "Boet , gaan haal 'n bakkie melk in die kombuis en sit dit op die stoep hier by die eetkamerse buitedeur neer."

[10]Kaptein Sadie wat langs mev. Cronje sit, dink dadelik dat daar êrens 'n slang moet wees.[11]Hy weet dat mens hulle met melk na sekere plekke toe kan lok.[12]Hy loer ongemerk rondom hom, maar hy gewaar niks.[13]Toe word hy skielik bang.[14]Hy kyk met kwaai oë na die gaste en sê hard: "Vriende, sit doodstil![15]Ek is 'n kaptein in die leër.[16]As ek beveel, moet my soldate gehoorsaam. [17]Nou, nie een moet beweeg voor ek driehonderd getel het nie. [18]Die persoon wat nie my bevel uitvoer nie, beboet ek met twintig rand."

Voordat /.....

[19]Voordat die mense verstaan wat eintlik aan die gang is, begin hy tel: een..twee...drie...honderd-en-een,...honderd-en-tagtig." [20]Die kaptein se gedrag is baie eienaardig, maar almal kyk na sy ernstige gesig en geeneen verroer n spier nie. [21]Hy tel nog altyd stadig verder: "twee-honderd-en-drie..tweehonderd-en-sestig,...tweehonderd een-en-sewentig...tweehonderd-en-tagtig...tweehonderd nege-en-tagtig."

[22]Toe sien hulle skielik die groot slang wat onder die tafel uit na die bakkie melk toe op die stoep seil.

[23]"Nou verstaan ek," sê een van die gaste, "waarom kaptein Sadie met sy ernstige speletjie begin het."

[24]"Ja," antwoord n tweede, "as hy nie so gou gedink het nie, kon die /rɛptəl/ reptiel een van ons gepik het."

[25]Toe staan oom Frans op en vra: "Het julle daaroor gedink dat ons netnou oor moed van mans en vroue gepraat het? [26]Ons het gesê n dame spring op n stoel en skree as sy skrik. [27]n Man, aan die ander kant, doen die regte ding. [28]Hier het ons n klinkklare bewys. [29]Kaptein Sadie het die gevaar gesien en presies geweet hoe on te handel. [30]Geluk, mnr. Sadie, en baie dankie."

[31]Onder handegeklap staan Kaptein Sadie op en sê: "Oppas, moenie te gou praat nie, vriende. [32]Ek is bevrees iemand anders moet die eer kry van wat hier gebeur het."

[33]Toe draai hy na mev. Cronje en praat met haar: [34]"Mevrou, ek het gehoor u stuur u seun om die melk op die stoep te gaan neersit. [35]Dit het my laat dink dat hier n slang is, maar hoe het u geweet dat hy onder die tafel is? [36]Sê vir ons."

54 37Mev. Cronje bloos so effens voor sy skamerig antwoord:38"Wel,
55 ek het gevoel hy hom op my linkervoet tuis maak."
56 39"Nou toe nou: roep kaptein Sadie verbaas uit.40"Onthou,mev.
57 Cronje het nie 'O!...O-O! O-O-O' gegil nie.41 Die vroue wen.

APPENDIX IV A2: AFRIKAANS TEXT

DIE BOERVROU

1 [1]Dis 'n somerdag in die Laeveld van Transvaal. [2]In die groot
2 sitkamer van oom Piet Cronje se plaashuis sit 'n klomp gaste
3 wat uitgenooi is om die middag daar te kom eet.[3]Hulle gesels
4 oor alles - oor die weer, oor die koedoe wat in 'n motor
5 vasgehardloop het en oor die moed van sommige mense.
6 [4]"Ek dink," sê Jan Rabie, "dat 'n dogter en 'n vrou oor die
7 algemeen minder moed as 'n seun en 'n man het. [5]As daar groot
8 gevaar is, sal 'n man dink en iets doen, maar 'n meisie? [6]Sy
9 spring op 'n stoel, skree benoud " O!....O -O-O!" en dit is
10 sover sy kom.
11 [7]"Dis nie waar nie," antwoord meer as een dame, maar net toe
12 lui die etensklok. [8]Die gaste stap na die ruim eetkamer
13 waar hulle om die groot tafel aansit. [9]Terwyl die ete aan die
14 gang is, roep mev. Cronje haar seun van so nege jaar en sê
15 saggies vir hom: "Boet , gaan haal 'n bakkie melk in die kombuis
16 en sit dit op die stoep hier by die eetkamerse buitedeur
17 neer."
18 [10]Kaptein Sadie wat langs mev. Cronje sit, dink dadelik dat daar
19 êrens 'n slang moet wees.[11]Hy weet dat mens hulle met melk na
20 sekere plekke toe kan lok.[12]Hy loer ongemerk rondom hom, maar
21 hy gewaar niks.[13]Toe word hy skielik bang.[14]Hy kyk met kwaai
22 oë na die gaste en sê hard: "Vriende, sit doodstil![15]Ek is 'n
23 kaptein in die leër.[16]As ek beveel, moet my soldate gehoorsaam.
24 [17]Nou, nie een moet beweeg voor ek driehonderd getel het nie.
25 [18]Die persoon wat nie my bevel uitvoer nie, beboet ek met
26 twintig rand."

Voordat /.....

[19]Voordat die mense verstaan wat eintlik aan die gang is, begin hy tel: een..twee...drie...honderd-en-een,...honderd-en-tagtig."

[20]Die kaptein se gedrag is baie eienaardig, maar almal kyk na sy ernstige gesig en geeneen verroer 'n spier nie.[21]Hy tel nog altyd stadig verder: "twee-honderd-en-drie..tweehonderd-en-sestig,...tweehonderd een-en-sewentig...tweehonderd-en-tagtig...tweehonderd nege-en-tagtig."

[22]Toe sien hulle skielik die groot slang wat onder die tafel uit na die bakkie melk toe op die stoep seil.

[23]"Nou verstaan ek," sê een van die gaste, "waarom kaptein Sadie met sy ernstige speletjie begin het."

[24]"Ja," antwoord 'n tweede, "as hy nie so gou gedink het nie, kon die reptiel een van ons gepik het."

[25]Toe staan oom Frans op en vra: "Het julle daaroor gedink dat ons netnou oor moed van mans en vroue gepraat het?[26]Ons het gesê 'n dame spring op 'n stoel en skree as sy skrik.[27]'n Man, aan die ander kant, doen die regte ding.[28]Hier het ons 'n klinkklare bewys. [29]Kaptein Sadie het die gevaar gesien en presies geweet hoe om te handel.[30]Geluk, mnr. Sadie, en baie dankie."

[31]Onder handegeklap staan Kaptein Sadie op en sê: "Oppas, moenie te gou praat nie, vriende. [32]Ek is bevrees iemand anders moet die eer kry van wat hier gebeur het."

[33]Toe draai hy na mev. Cronje en praat met haar:[34]"Mevrou, ek het gehoor u stuur u seun om die melk op die stoep te gaan neersit. [35]Dit het my laat dink dat hier 'n slang is, maar hoe het u geweet dat hy onder die tafel is?[36]Sê vir ons."

Mev.Cronje /.....

54 [37]Mev. Cronje bloos so effens voor sy skamerig antwoord:[38]"Wel,
55 ek het gevoel hy hom op my linkervoet tuis maak."
56 [39]"Nou toe nou: roep kaptein Sadie verbaas uit.[40]"Onthou,mev.
57 Cronje het nie 'O!...O-O! O-O-O' gegil nie.[41] Die vroue wen.

APPENDIX IV A3: AFRIKAANS TEXT

DIE BOERVROU

1 [1]Dis n somerdag in die Laeveld van Transvaal. [2]In die groot
2 sitkamer van oom Piet Cronje se plaashuis sit n klomp gaste
3 wat uitgenooi is om die middag daar te kom eet.[3]Hulle gesels
4 oor alles - oor die weer, oor die koedoe wat in n motor
5 vasgehardloop het en oor die moed van sommige mense.

6 [4]"Ek dink," sê Jan Rabie, "dat n dogter en n vrou oor die
7 algemeen minder moed as n seun en n man het. [5]As daar groot
8 gevaar is, sal n man dink en iets doen, maar n meisie? [6]Sy
9 spring op n stoel, skree benoud " O!....O -O-O!" en dit is
10 sover sy kom.

11 [7]"Dis nie waar nie," antwoord meer as een dame, maar net toe
12 lui die etensklok. [8]Die gaste stap na die ruim eetkamer
13 waar hulle om die groot tafel aansit. [9]Terwyl die ete aan die
14 gang is, roep mev. Cronje haar seun van so nege jaar en sê
15 saggies vir hom: "Boet , gaan haal n bakkie melk in die kombuis
16 en sit dit op die stoep hier by die eetkamer se buitedeur
17 neer."

18 [10]Kaptein Sadie wat langs mev. Cronje sit, dink dadelik dat daar
19 êrens n slang moet wees.[11]Hy weet dat mens hulle met melk na
20 sekere plekke toe kan lok.[12]Hy loer ongemerk rondom hom, maar
21 hy gewaar niks.[13]Toe word hy skielik bang.[14]Hy kyk met kwaai
22 oë na die gaste en sê hard: "Vriende, sit doodstil![15]Ek is n
23 kaptein in die leër.[16]As ek beveel, moet my soldate gehoorsaam.
24 [17]Nou, nie een moet beweeg voor ek driehonderd getel het nie.
25 [18]Die persoon wat nie my bevel uitvoer nie, beboet ek met
26 twintig rand."

Voordat /.....

19 Voordat die mense verstaan wat eintlik aan die gang is, begin
hy tel: een..twee...drie...honderd-en-een,...honderd-en-tagtig."
20 Die kaptein se gedrag is baie eienaardig, maar almal kyk na
sy ernstige gesig en geeneen verroer 'n spier nie. 21 Hy tel
nog altyd stadig verder: "twee-honderd-en-drie..tweehonderd-
en-sestig,...tweehonderd een-en-sewentig...tweehonderd-en-
tagtig...tweehonderd nege-en-tagtig."

22 Toe sien hulle skielik die groot slang wat onder die tafel uit
na die bakkie melk toe op die stoep seil.

23 "Nou verstaan ek," sê een van die gaste, "waarom kaptein Sadie
met sy ernstige speletjie begin het."

24 "Ja," antwoord 'n tweede, "as hy nie so gou gedink het nie, kon
die reptiel een van ons gepik het."

25 Toe staan oom Frans op en vra: "Het julle daaroor gedink dat
ons netnou oor moed van mans en vroue gepraat het? 26 Ons het
gesê 'n dame spring op 'n stoel en skree as sy skrik. 27 'n Man,
aan die ander kant, doen die regte ding. 28 Hier het ons 'n
klinkklare bewys. 29 Kaptein Sadie het die gevaar gesien en
presies geweet hoe on te handel. 30 Geluk, mnr. Sadie, en baie
dankie."

31 Onder handegeklap staan Kaptein Sadie op en sê: "Oppas, moenie ---
--- te gou praat nie, vriende. 32 Ek is bevrees iemand anders moet
die eer kry van wat hier gebeur het."

33 Toe draai hy na mev. Cronje en praat met haar: 34 "Mevrou, ek
het gehoor u stuur u seun om die melk op die stoep te gaan
neersit. 35 Dit het my laat dink dat hier 'n slang is, maar hoe
het u geweet dat hy onder die tafel is? 36 Sê vir ons."

54 [37]Mev. Cronje (R) bloos so effens voor sy skamerig antwoord:[38]"Wel,
55 ek het gevoel hy (nys) hom op my linkervoet tuis (uc) gemaak (23) maak."
56 [39](R) "Nou toe nou: roep kaptein Sadie verbaas uit.[40]"Onthou, mev.
57 Cronje het nie 'O!...O-O! O-O-O' gegil nie.[41] Die (uc) vroue (25) wen.

APPENDIX IV A4: AFRIKAANS TEXT

DIE BOERVROU

[1]Dis 'n somerdag in die Laeveld van Transvaal. [2]In die groot sitkamer van oom Piet Cronje se plaashuis sit 'n klomp gaste wat uitgenooi is om die middag daar te kom eet. [3]Hulle gesels oor alles - oor die weer, oor die koedoe wat in 'n motor vasgehardloop het en oor die moed van sommige mense.

[4]"Ek dink," sê Jan Rabie, "dat 'n dogter en 'n vrou oor die algemeen minder moed as 'n seun en 'n man het. [5]As daar groot gevaar is, sal 'n man dink en iets doen, maar 'n meisie? [6]Sy spring op 'n stoel, skree benoud " O!....O -O-O!" en dit is sover sy kom.

[7]"Dis nie waar nie," antwoord meer as een dame, maar net toe lui die etensklok. [8]Die gaste stap na die ruim eetkamer waar hulle om die groot tafel aansit. [9]Terwyl die ete aan die gang is, roep mev. Cronje haar seun van so nege jaar en sê saggies vir hom: "Boet , gaan haal 'n bakkie melk in die kombuis en sit dit op die stoep hier by die eetkamerse buitedeur neer."

[10]Kaptein Sadie wat langs mev. Cronje sit, dink dadelik dat daar êrens 'n slang moet wees. [11]Hy weet dat mens hulle met melk na sekere plekke toe kan lok. [12]Hy loer ongemerk rondom hom, maar hy gewaar niks. [13]Toe word hy skielik bang. [14]Hy kyk met kwaai oë na die gaste en sê hard: "Vriende, sit doodstil! [15]Ek is 'n kaptein in die leër. [16]As ek beveel, moet my soldate gehoorsaam. [17]Nou, nie een moet beweeg voor ek driehonderd getel het nie. [18]Die persoon wat nie my bevel uitvoer nie, beboet ek met twintig rand."

Voordat /.....

[19]Voordat die mense verstaan wat eintlik aan die gang is, begin hy tel: een..twee...drie...honderd-en-een,...honderd-en-tagtig." [20]Die kaptein se gedrag is baie eienaardig, maar almal kyk na sy ernstige gesig en geeneen verroer 'n spier nie.[21]Hy tel nog altyd stadig verder: "twee-honderd-en-drie..tweehonderd-en-sestig,...tweehonderd een-en-sewentig...tweehonderd-en-tagtig...tweehonderd nege-en-tagtig."

[22]Toe sien hulle skielik die groot slang wat onder die tafel uit na die bakkie melk toe op die stoep seil.

[23]"Nou verstaan ek," sê een van die gaste, "waarom kaptein Sadie met sy ernstige speletjie begin het."

[24]"Ja," antwoord 'n tweede, "as hy nie so gou gedink het nie, kon die reptiel een van ons gepik het."

[25]Toe staan oom Frans op en vra: "Het julle daaroor gedink dat ons netnou oor moed van mans en vroue gepraat het?[26]Ons het gesê 'n dame spring op 'n stoel en skree as sy skrik.[27]'n Man, aan die ander kant, doen die regte ding.[28]Hier het ons 'n klinkklare bewys. [29]Kaptein Sadie het die gevaar gesien en presies geweet hoe on te handel.[30]Geluk, mnr. Sadie, en baie dankie."

[31]Onder handegeklap staan Kaptein Sadie op en sê: "Oppas, moenie te gou praat nie, vriende. [32]Ek is bevrees iemand anders moet die eer kry van wat hier gebeur het."

[33]Toe draai hy na mev. Cronje en praat met haar:[34]"Mevrou, ek het gehoor u stuur u seun om die melk op die stoep te gaan neersit. [35]Dit het my laat dink dat hier 'n slang is, maar hoe het u geweet dat hy onder die tafel is?[36]Sê vir ons."

54 [37]Mev. Cronje bloos so effens voor sy skamerig antwoord:[38]"Wel,
55 ek het gevoel hy hom op my linkervoet tuis maak."
56 [39]"Nou toe nou: roep kaptein Sadie verbaas uit.[40]"Onthou,mev.
57 Cronje het nie 'O!...O-O! O-O-O' gegil nie.[41] Die vroue wen.

APPENDIX IV A5: AFRIKAANS TEXT

DIE BOERVROU

[1]Dis 'n somerdag in die Laeveld van Transvaal. [2]In die groot sitkamer van oom Piet Cronje se plaashuis sit 'n klomp gaste wat uitgenooi is om die middag daar te kom eet. [3]Hulle gesels oor alles - oor die weer, oor die koedoe wat in 'n motor vasgehardloop het en oor die moed van sommige mense.

[4]"Ek dink," sê Jan Rabie, "dat 'n dogter en 'n vrou oor die algemeen minder moed as 'n seun en 'n man het. [5]As daar groot gevaar is, sal 'n man dink en iets doen, maar 'n meisie? [6]Sy spring op 'n stoel, skree benoud " O!....O -O-O!" en dit is sover sy kom.

[7]"Dis nie waar nie," antwoord meer as een dame, maar net toe lui die etensklok. [8]Die gaste stap na die ruim eetkamer waar hulle om die groot tafel aansit. [9]Terwyl die ete aan die gang is, roep mev. Cronje haar seun van so nege jaar en sê saggies vir hom: "Boet , gaan haal 'n bakkie melk in die kombuis en sit dit op die stoep hier by die eetkamerse buitedeur neer."

[10]Kaptein Sadie wat langs mev. Cronje sit, dink dadelik dat daar êrens 'n slang moet wees. [11]Hy weet dat mens hulle met melk na sekere plekke toe kan lok. [12]Hy loer ongemerk rondom hom, maar hy gewaar niks. [13]Toe word hy skielik bang. [14]Hy kyk met kwaai oë na die gaste en sê hard: "Vriende, sit doodstil! [15]Ek is 'n kaptein in die leër. [16]As ek beveel, moet my soldate gehoorsaam. [17]Nou, nie een van julle moet beweeg voor ek driehonderd getel het nie. [18]Die persoon wat nie my bevel uitvoer nie, beboet ek met twintig rand."

Voordat /.....

[19]Voordat die mense verstaan wat eintlik aan die gang is, begin hy tel: een..twee...drie...honderd-en-een,...honderd-en-tagtig." [20]Die kaptein se gedrag is baie eienaardig (uc) (8), maar almal kyk na sy ernstige gesig en geeneen verroer 'n spier nie.[21]Hy tel nog altyd stadig verder: "twee-honderd-en-drie..tweehonderd-en-sestig,...tweehonderd een-en-sewentig...tweehonderd-en-tagtig...tweehonderd nege-en-tagtig."

[22]Toe sien hulle skielik die groot slang wat onder die tafel uit na die bakkie melk toe op die stoep seil.

[23]"Nou verstaan ek," sê een van die gaste, "waarom kaptein Sadie met sy ernstige speletjie begin het."

[24]"Ja," antwoord 'n tweede, "as hy nie so gou gedink het nie, kon die reptiel een van ons gepik het."

[25]Toe staan oom Frans op en vra: "Het julle daaroor gedink dat ons netnou oor moed van mans en vroue gepraat het?[26]Ons het gesê 'n dame spring op 'n stoel en skree as sy skrik.[27]'n Man, aan die ander kant, doen die regte ding.[28]Hier het ons 'n klinkklare bewys. [29]Kaptein Sadie het (uc) die (7) gevaar gesien en presies geweet hoe on te handel.[30]Geluk, mnr. Sadie, en baie dankie."

[31]Onder handegeklap staan Kaptein Sadie op en sê: "Oppas, moenie te gou praat nie, vriende. [32]Ek is bevrees iemand anders moet die eer kry van wat hier gebeur het."

[33]Toe draai hy na mev. Cronje en praat met haar:[34]"Mevrou, (R) ek ... het gehoor u stuur u seun om die melk op die stoep te gaan neersit. [35]Dit het my (uc) dadelik (10) laat dink dat hier 'n slang is, maar hoe het u geweet dat hy onder die tafel (uc) is (11)?[36]Sê vir ons."

54 [37]Mev. Cronje bloos so effens voor sy skamerig antwoord:[38]"Wel,
55 ek het gevoel hy hom op my linkervoet tuis maak."
56 [39]"Nou toe nou: roep kaptein Sadie verbaas uit.[40]"Onthou,mev.
57 Cronje het nie '0!...0-0! 0-0-0' gegil nie.[41] Die vroue wen.

APPENDIX V : CODING GUIDE

The following guide gives the possible values for the coding categories and provides examples of miscues which illustrate value within each of the categories.

	TEXT	READER
1. Graphic Similarity		
0 no graphic similarity	had	give
1 low graphic similarity (key letter or ending)	kind	can
2.moderate similarity (common beginnings; begin/mid; begin/ends; mids/ends)	ghosts	goats
3 high similarity (common begin/mid/ends; one letter different,etc.)	blurted	blurred
2. Phonemic Similarity: 0-3		
0 no similarity	had	give
1 low similarity (some common sound)	kind	can
2 moderate similarity (see graphic)	squeaked	squirted
3 high similarity (see graphic)	fluff	bluff
3. Grammatical Function: 0-2		
0 different	seen	shiny
1 same	pinched	panched
2 indeterminate	fussy	fuze
4. Syntactic Acceptability:0-6		
0 not acceptable	People didn't seem interested.	People didn't same interested.
1 acceptable with prior part of sentence	The owner and his wife	The owner his wife..
2 acceptable with following part of sentence	It was about 60 feet high.	I was 60 feet high.
3 fully acceptable in sentence	We had large crowds when we..	He had large crowd when we...

	TEXT	READER
4 fully acceptable in total passage	They offered free balloons....	They offered free Sbay-loons
5 Okay in sentence except except for other miscues	As Niemand prepared to leave he said...	And Niemand prepared to leave, he said...
6 okay in passage except for other miscues		

Syntactic Change: 0-3 (coded only for those miscues with a syntactic acceptability value of 3-4-5-6)

0 unrelated	Where did it bite you	A bite ?
1 major grammatical change	Lets make it a hundred and fifty	Let's make a hundred and fifty.
2 minor grammatical change	They let the young boys ride on the elephants. Every Wednesday night....	They let the young boys ride on the elephants every Wednesday night.
3 little grammatical change (change in person, tense or number, function word, etc. no change.)	into a tank of water....	in a tank of water.

Semantic Acceptability: 0-6

0 not acceptable	Mr. Purcell and his wife.....	Miss Purcell and his wife....
1 acceptable with prior	The owner and his wife worried about what to do	The owner and his wife worried about that to do.
2 acceptable with following part of sentence	....to all children under seven years of age.	....to all children another seven years of age.
3 fully acceptable in sentence	The stranger continued to shake his head.	The stranger continued to shake his hands.

4/....

		TEXT	READER
4	fully acceptable in passage	Have you ever worked in the circus before	Have you ever worked the circus before?
5	okay in sentence except for other miscues.		
6	okay in passage except for other miscues.		

Semantic Change: 0-3 (coded only for those miscues with a semantic acceptability value of 3-4-5-6)

0	unrelated	The bulb began to <u>glow</u>	The bulb began to <u>grow</u>
1	major meaning change (loss of important meaning element.)	Mr. Purcell did not believe in <u>ghosts</u>.	Mr. Purcell did not believe in <u>goats</u>.
2	minor meaning change (loss of minor incident or detail)	He continued to shake his <u>head</u>.	He continued to shake his hands.
3	little meaning change (change in person, tense, number non critical; slight change in connotation, no change.	I know youre right	I know you are right

Correction: 0-3

0 no correction
1 correction
2 unsuccessful attempt at correction
3 correct form abandoned

Dialect: 0-4

0 miscue does not involve the dialect of the reader
1 ideolect-miscue appears to be an idiosyncratic form
2 supercorrect-miscue involves supercorrection or pronunciation
3 ESL dialect-miscue involves forms typically seen in the reading of non-native subjects, including miscues with irregular forms of nouns, past and plural marks)
4 Allolog - miscue is an alternate form of the word.

APPENDIX VI READING MISCUE INVENTORY CODING SHEET

(Acknowledgements to Y. Goodman and C. Burke 1972)

Researcher: J.H. PITT

READER: EUGENE (STD 1) DATE: 12/06/85 STORY: DIE BOERVROU

Total Sentences: 58 Total Words: 607 Total Miscues: 25

Total # Words 607

Total # Miscues 25

MPHW 4,12

NOTES

Line Number	Sentence Number	Miscue Number	READER	TEXT	GRAPHIC (0-3) 1	PHONEMIC (0-3) 2	GRAM FUNC. (0-2) 3	SYN. ACCEPT (0-6) 4	SYN. CHANGE (0-3) 5	SEM ACCEPT (0-6) 6	SEM CHANGE (0-3) 7	CORRECTION (0-3) 8	DIALECT (0-4) 9
1	1	1	die	-	-	-	-	4	3	4	3	0	2
4	3	2	$kodie	koedoe	2	2	2	0	-	0	-	2	0
7	4	3	algemene	algemeen	3	3	0	4	3	4	3	1	0
10	6	4	soos	-	-	-	-	4	3	4	3	0	2
19	10	5	ŋ	-	-	-	-	4	3	4	3	0	2
20	12	6	moet	maar	1	1	0	1	-	1	-	1	0
21	12	7	-	hy	-	-	-	4	3	4	3	1	2
24	17	8	oor	voor	3	3	0	2	-	0	-	0	0
24	17	9	-	ek	-	-	-	1	-	1	-	0	0
25	18	10	-	nie	-	-	-	1	-	1	-	1	0
30	20	11	geen mens	geeneen	2	2	1	4	3	4	3	1	4
31	21	12	-	altyd	-	-	-	6	3	6	3	0	2
32	21	13	tweehonderd-en-sewentig	tweehonderd een-en-sewentig	3	3	1	6	3	6	3	0	0
34	22	14	-	wat	-	-	-	6	3	6	3	0	0
35	22	15	-	op	-	-	-	1	-	1	-	0	0
36	23	16	-	waarom	-	-	-	1	-	1	-	0	0
39	24	17	$/raptil/	reptiel (/reptil/)	3	3	1	4	3	4	3	0	0
44	29	18	-	en	-	-	-	1	-	1	-	0	0
48	32	19	niemand	iemand	3	3	1	4	3	3	1	0	0
51	34	20	ŋ	u	0	1	0	4	3	4	2	0	2
54	37	21	$/møf/	Mev. (/mevrɑʊ/)	2	2	2	0	-	0	-	0	0
54	37	22	-	Cronje	-	-	-	6	3	6	3	0	0
54	37	23	se	so	2	2	0	0	-	0	-	1	0
55	38	24	-	hoe	-	-	-	1	-	1	-	0	0
55	38	25	-	hom	-	-	-	3	2	1	-	0	0
				TOTAL:	5	5	4	13	15	12	11	6	
				PERCENT:	20	20	16	52	60	48	44	24	

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READING MISCUE INVENTORY CODING SHEET

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APPENDIX VI A2

(Acknowledgements to Y. Goodman and C. Burke 1972)

Researcher: J.H. PITT

READER: MADELEIN (STD 2) DATE: 12/06/85 STORY: DIE BOERVROU

Total Sentences: 58 Total Words: 607 Total Miscues: 22

Total # Words 607

Total # Miscues 22

MPHW 3.62

NOTES

Line Number	Sentence Number	Miscue Number	READER	TEXT	GRAPHIC (0-3) 1	PHONEMIC (0-3) 2	GRAM FUNC. (0-2) 3	SYN. ACCEPT (0-6) 4	SYN. CHANGE (0-3) 5	SEM ACCEPT (0-6) 6	SEM CHANGE (0-3) 7	CORRECTION (0-3) 8	DIALECT (0-4) 9
8	5	1	nie	'n	1	0	0	1	-	1	-	2	0
8	5	2	meisies	meisie	3	3	1	3	3	6	3	2	0
10	6	3	soos	-	-	-	-	6	3	4	3	0	1
11	7	4	nie waar nie."antwoord ...	nie waar nie," antwoord	-	3	0	1	-	1	-	1	0
11	7	5	(met toe. lui...)	(net toe lui) -	-	3	0	1	-	1	-	1	0
13	8	6	'n	die	0	0	1	6	3	4	3	1	2
19	11	7	'n	-	-	-	-	1	-	4	3	0	0
20	12	8	ondermekaar	ongemerk	1	1	1	0	-	0	-	0	0
20	12	9	rond	rondom	2	2	1	1	-	1	-	0	0
25	18	10	beveel	bevel	2	2	0	0	-	6	3	0	1
30	20	11	geneem	geeneen	2	2	0	0	-	0	-	2	0
30	20	12	vervoer	verroer	3	3	1	1	-	1	1	0	0
30	20	13	die	'n	0	0	1	1	-	0	-	0	0
32	21	14	tweehonderd een-en-sewentig	tweehonderd-en-sewentig	2	2	1	4	3	4	3	0	0
33	21	15	tweehonderd-en-neëntig	tweehonderd nege-en-tagtig	2	2	1	4	3	4	3	2	0
37	23	16	#spelletjie	speletjie	3	3	1	4	3	4	3	0	1
38	24	17	sy	so	2	2	0	1	-	1	-	1	0
39	24	18	die	ons	0	0	0	1	-	1	-	1	0
40	25	19	dan	dat	3	3	0	1	-	1	-	2	0
44	28	20	klinkklaar	klinkklare	3	3	0	2	-	4	3	1	0
49	32	21	-	kry	-	-	-	2	-	4	0	1	0
51	34	22	'n	u	0	3	0	4	3	4	2	1	0
				TOTAL:	5	8	12	6	7	11	9	8	
				PERCENT:	22,7	36,4	54,5	27,3	31,8	50	40,9	36,7	

READING MISCUE INVENTORY CODING SHEET

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APPENDIX VI. A3: (Acknowledgements to Y. Goodman and C. Burke 1972)

Researcher: J.H. PITT

READER: CARMEN (STD 3) DATE: 12/06/85 STORY: DIE BOERVROU

Total Sentences: 58 Total Words: 607 Total Miscues: 29

Total # Words 607

Total # Miscues 29

MPHW 4.78

NOTES

Line Number	Sentence Number	Miscue Number	READER	TEXT	GRAPHIC (0-3) 1	PHONEMIC (0-3) 2	GRAM FUNC. (0-2) 3	SYN. ACCEPT (0-6) 4	SYN. CHANGE (0-3) 5	SEM ACCEPT (0-6) 6	SEM CHANGE (0-3) 7	CORRECTION (0-3) 8	DIALECT (0-4) 9
1	1	1	Op	Dis	0	0	0	6	1	6	3	0	0
1	1	2	die	-	-	-	-	5	3	6	3	0	0
4	3	3	ʃkðedðé	kŏedŏe	3	2	2	0	-	0	-	0	0
4	3	4	het	wat	1	1	0	2	-	2	-	1	0
4	3	5	die	ŋ	0	0	1	6	3	6	3	1	0
8	5	6	-	en	-	-	-	0	-	0	-	1	0
9	6	7	dan	dit	1	1	0	1	-	1	-	1	0
10	6	8	soos	-	-	-	-	5	1	5	3	0	2
13	8	9	-	groot	-	-	-	4	3	4	3	1	0
16	9	10	van	-	-	-	-	2	-	2	-	1	0
19	11	11	ŋ	-	-	-	-	6	3	6	3	0	4
19	11	12	moet	met	2	2	0	2	-	2	-	0	1
19	11	13	kan	-	-	-	-	2	-	2	-	1	0
23	16	14	jy	my	2	2	1	1	-	1	-	1	0
24	17	15	Nou	Nie	1	1	0	0	-	6	2	1	0
28	19	16	eenhonderd	honderd	2	2	1	4	3	4	3	0	4
29	20	17	daar	baie	0	0	0	0	-	0	-	1	0
30	20	18	vervoer	verroer	3	2	1	1	-	0	-	0	0
31	21	19	tot	nog	1	1	0	1	-	1	-	1	0
35	22	20	blik	bakkie	1	1	1	4	3	3	2	1	0
41	25	21	en	-	-	-	-	3	3	3	2	0	0
43	28	22	Hy	hier	1	1	0	2	-	2	-	0	0
47	31	23	handeklap	handegesklap	2	2	0	0	-	0	-	1	0
49	32	24	-	van	-	-	-	0	-	0	-	1	0
52	35	25	daar	-	-	-	-	1	-	1	-	0	0
52	35	26	die	-	-	-	-	0	-	0	-	0	0
53	35	27	daar	hier	1	1	1	6	3	6	3	0	0
55	38	28	gemaak	maak	2	2	1	1	-	1	-	0	0
57	41	29	vrou	vroue	3	3	1	4	3	4	3	0	0
				TOTAL:	3	1	8	8	9	9	9	14	
				PERCENT:	10,3	3,4	27,6	27,6	31,0	31,0	31,0	48,3	

READING MISCUE INVENTORY CODING SHEET

APPENDIX VI. A4: (Acknowledgements to Y. Goodman and C. Burke 1972)

Researcher: J.H. PITT

READER: ANGELA (STD 4) DATE: 12/06/85 STORY: DIE BOERVROU

Total Sentences: 58 Total Words: 607 Total Miscues: 11

												TOTAL	PERCENT
Line Number	1	4	10	13	13	19	19	24	37	51	51		
Sentence Number	1	3	6	8	8	11	11	17	23	34	34		
Miscue Number	1	2	3	4	5	6	7	8	9	10	11		
READER	die	die	soos	op	sit	-	'n	voordat	my	bakkie	sit		
TEXT	-	'n	-	om	aansit	dat	-	voor	sy	melk	gaan aansit		
1 GRAPHIC (0-3)	-	0	-	2	2	-	-	2	2	0	1	-	-
2 PHONEMIC (0-3)	-	0	-	2	2	-	-	2	2	0	1	-	-
3 GRAM FUNC. (0-2)	-	1	-	1	1	-	-	1	1	1	1	7	63,6
4 SYN. ACCEPT (0-6)	4	4	4	6	6	1	6	4	1	6	6	9	81,9
5 SYN. CHANGE (0-3)	3	3	3	3	3	-	3	3	-	3	3	9	81,8
6 SEM ACCEPT (0-6)	4	4	4	1	6	1	6	4	1	6	6	8	72,7
7 SEM CHANGE (0-3)	3	3	3	2	3	-	3	3	-	3	3	8	72,7
8 CORRECTION (0-3)	0	0	0	0	1	1	0	1	1	1	1	6	54,5
9 DIALECT (0-4)	0	0	0	0	0	0	0	0	0	0	0		

Total # Words 607

Total # Miscues 11

MPHW 1,8

NOTES

READING MISCUE INVENTORY CODING SHEET

(Acknowledgements to Y. Goodman and C. Burke 1972)

Researcher: J.H. PITT

APPENDIX VI. A5:

READER: HEIDI (STD 5) DATE: 12/06/85 STORY: DIE BOERVROU

Total Sentences: 58 Total Words: 607 Total Miscues: 13

Total # Words 607
Total # Miscues 13
MPHW 2,14
NOTES

Line Number	Sentence Number	Miscue Number	READER	TEXT	1 GRAPHIC (0-3)	2 PHONEMIC (0-3)	3 GRAM FUNC. (0-2)	4 SYN. ACCEPT (0-6)	5 SYN. CHANGE (0-3)	6 SEM ACCEPT (0-6)	7 SEM CHANGE (0-3)	8 CORRECTION (0-3)	9 DIALECT (0-4)
1	1	1	somersdag	somerdag	3	3	1	6	3	6	3	1	4
1	1	2	die	–	–	–	–	6	3	6	3	1	2
16	9	3	'n	by	0	0	1	4	3	4	3	1	4
18	10	4	Piet	Kaptein	0	0	1	3	2	3	1	1	0
18	10	5	het	wat	1	1	0	1	–	1	–	1	0
24	17	6	van julle	–	–	–	–	4	3	4	3	0	2
25	18	7	–	nie	–	–	–	1	–	1	–	1	0
29	20	8	aardig	eienaardig	2	2	1	3	3	1	–	0	0
44	29	9	'n	die	0	0	1	4	3	4	3	0	0
52	35	10	dadelik	–	–	–	–	6	3	6	3	0	2
53	35	11	–	is	–	–	–	1	–	1	–	0	0
54	37	12	blaas	bloos	3	3	1	3	3	0	–	1	0
55	38	13	oor	hom op	0	0	2	4	3	3	2	1	0
				TOTAL:	2	2	6	7	9	6	6	8	
				PERCENT:	15,4	15,4	46,2	53,8	69,2	46,2	46,2	61,5	

APPENDIX VII A.1: RETELLING OF "DIE BOERVROU" (Translation)

STD 1 READER (EUGENE = EUG) (RES= RESEARCHER)

RES: ...Could you retell the story? (Pause) Could you speak up please.

EUG: The whole story?

RES: Yes. From the start.(Pause) Where did everything... all this happen?

EUG: At Mr Cronje's home.

RES: What were all the people doing there?

EUG: They had come over for dinner and when...while they were saying grace... (Pause)

RES: What were they discussing before grace?

EUG: About when women are frightened then they will scream and jump on chairs, but men will immediately do something.

RES: Correct.

EUG: And then the dinner-bell rang and then everyone went to the hall. Then Mrs Cronje told her son to put a dish with milk in the diningroom door. Captain Sadie heard this and immediately knew that there was a snake in the house. Then he told the people that everyone must sit still till he had counted up to 300. The he started counting : 1,2,3... 100...(Pause)

RES: Did something happen before he came to three hundred?

EUG: Then the snake came out of the table and went to the dish of milk near the door. Everyone knew that Mr Cronje knew there was a snake and then Mr Cronje said we talked about women who always screamed when they were frightened, and men who always did the right thing. Then Mr Cronje said women would scream and then Mr Cronje talked to...then Captain Sadie talked to Mrs Cronje and asked, "How did you know that there was a snake under the table?" Then she said, "I felt the snake settle on her left leg." And they said it was then she called her son and told him to put a dish of milk near the door.

RES: Was Mrs Cronje a brave woman?

EUG: Yes, Sir.

RES: Who, according to the story...who is the bravest...men or women?

EUG: Men.

RES: What does Captain Sadie say?

EUG: (Silence)

RES: You also read that they talked about a kudu. What is a "kudu"?

EUG: A type of deer.

RES: They talked about courage. What is "courage?"

EUG: When something happens...like girls...not to be afraid of it.

RES: Is that what courage means?

EUG: Yes, Sir.

RES: It also says the Captain's behaviour was strange ("eienaardig"). What is "eienaardig?" (Pause) How would you describe his behaviour?

EUG: Strange.

RES: Thank you. Now it says, "If he had not thought so quickly, the reptile would have bitten one of us." What is a reptile?

EUG: Is a snake. Belongs to the reptile family. I know about the black mamba, pythons, tree snakes, water snakes...

RES: Have you never heard of reptiles? But you think a reptile is a snake.

EUG: A rattlesnake, sir?

RES: You think it is a type of snake?

EUG: Yes, Sir.

RES: Good. Now they refer to "cut-and-dried evidence" ("klinkklare bewys"). What is "klinkklare bewys?"

EUG: Shows...what one can see. Hear.

APPENDIX VIIA.2: RETELLING OF "DIE BOERVROU" (Translation)

STD 2 READER (MADELEIN = MAD)

RES: You read beautifully. Let's see how well you understand the story. Could you retell it?

MAD: The story is about a farmer's wife who had invited guests to dinner and a bell rang and they had to go and eat and then Mrs Cronje called her son of about 9 years of age to put a dish with milk on the stoep and Captain Sadie heard and told the people to sit still and not move. And he said he would count up to three hundred and then they could move. (Pause)

RES: Do you remember the beginning? What did they talk about?

MAD: About how scared women are.

RES: Who did the say has more courage?

MAD: Men.

RES: What do women do when there is danger?

MAD: They jump on chairs and scream.

RES: Now what happened? Why did Mrs Cronje tell her son to bring milk?

MAD: To bring the snake closer to the guests.

RES: To the guests? Where was the snake?

MAD: On Mrs Cronje's foot.

RES: Where did they put the milk?

MAD: On the stoep.

RES: Why did she say it should be put there?

MAD: To get the snake away.

RES: So Mrs Cronje thought. Do you think Mrs Cronje showed resourcefulness?

MAD: Yes.

RES: Why did Captain Sadie say they must not move? What happens when a person moves?

MAD: Then the snake comes closer to see.

RES: They say here, "A man, on the other hand, does the right thing. Here is cut and dried evidence." What does cut and dried mean? Do you know?

(long pause)

RES: It does not really matter. Who was the more courageous?

MAD: The /.....

APPENDIX VIIA.2 CONT.

MAD: The woman.

RES: Is the woman braver than the man? That's what captain Sadie says, isn't it?

APPENDIX VIIA.3 : RETELLING OF "DIE BOERVROU" (Translated)

STD 3 READER (CARMEN= CAR)

RES: Could you retell the story without looking at the story?
CAR: The farmer's wife...a summer's day...(long pause)

RES: You may sit down. Who were the people? What had brought them together?

CAR: They... Mr Cronje had invited them to dinner. It was a summers day in the Lowveld. The guests were sitting in Mr Cronje's large room and talked about how a man or a boy would take fright when there is an accident, but a woman or a girl would scream "O....O....Oh! " Then Mrs Cronje called her son to get some milk and poor it into a dish and put out on the stoep because she had felt a snake make itself comfortable on her foot. Then Mr..mr...(long pause)

RES: Let's say a man...

CAR: Then a man stood up and shouted that nobody should peep or get up. They had to sit still. He was going to count up to three thousand, and that his soldiers and....that Mr Cronje had asked that her son and that she had shyly turned and said, I had told the boy to put milk in a dish and to put on the stoep because I had felt a reptile settle on her foot...and then they called the guests to come and eat and they ate at table (stopped retelling).

RES: Could you tell me, Carmen, what the topic of the debate was?
CAR: They talked about how a man and a boy would take fright when they saw an accident, but a girl and a woman would jump on a chair and scream.
RES: When would they jump on a chair? When do girls or women usually jump on chairs?
CAR: When someone has died.
RES: Tell me, who won the debate? The men or the women? Who, did Captain Sadie say, is the more courageous?

CAR.: The /.....

APPENDIX VIIA./3 CONT.

CAR: The men.
RES: So you say the men won. What did the other men say?
CAR: They said the men are braver.
RES: Who was the most resourceful?
CAR: Captain Sadie.
RES: Mrs Cronje.... was she not resourceful? Can you remember what she did?
CAR: She had told her son to put milk on the stoep.
RES: Why did she do that?
CAR: She had felt a snake on her foot.
RES: Why did she put milk on the stoep?
CAR: Because she knew when there is a snake...one must put out milk....
RES: Are snakes fond of milk?
CAR: Yes, sir.
RES: Who is more courageous: men or women?
CAR: Women.
RES: Why do you say so? (long pause). Was Mrs Cronje brave?
CAR: Yes.

APPENDIX VIIA.4 : RETELLING OF "DIE BOERVROU" (Translation)

STD 4 READER (ANGELA= ANG).

RES: Tell me the story without looking at the page.

ANG: Mr Cronje and his wife had invited guests for dinner and Mrs Cronje called her son to put a dish with milk on the stoep and she knew there's a snake under the table but nobody knew and Captain Sadie counted to three hundred and the snake came out to the dish and Mrs Cronje did not scream "Oh! Oh! Oh!, but they thought it was Captain Sadie's work to save the people and to.... Mrs Cronje was praised by the people and she blushed shyly when she had to tell how she knew that a snake had settled on her left foot and the men said the women win because a man will always do something but a woman will jump on a chair and scream "Oh! Oh! Oh !"

RES: Tell me....before they....when they sat at the table... before they sat at the table, they had a discussion. What did they talk about?

ANG: About courage, about the weather and how a kudu ran into a car when they were on the way to the Cronje's farm.

RES: What courage did they talk about?

ANG: About men and boys and ladies and girls.

RES: What did Mrs Cronje do when she felt the snake on her foot?

ANG: She called her son and whispered in his ear that he should put a dish with milk on the stoep.

RES: Why milk?

ANG: Because milk attracts snakes away from places.

RES: Why does it attract snakes away from places?

ANG: Because milk is a dairy product and because snakes and it sometimes.....(inaudible).

RES: Sometimes? (Pause) Don't they always like milk?

ANG: Yes.

RES: Tell me...this story...what does it prove? Who is... who has more courage? Men or women?

ANG: Women/....

APPENDIX VIIA.4 CONT.

ANG: Women have more courage.

RES: Do you think so?

ANG: Yes.

RES: Who..did they...are women more resourceful than men? According to the story

ANG: No.

RES: Why not?

ANG: Captain Sadie had jumped up and warned the guests to sit still while he counted.

RES: If you had to decide who was the bravest...men or women ...what would you say, after you had read the story?

ANG: I would say women.

RES: Women. Oh...so you wouldn't say they are equally brave? The one does not think he/she is cleverer than the other?

ANG: Yes.

RES: Did Captain Sadie not think, too?

ANG: Yes

APPENDIX VII - 5: RETELLING OF "DIE BOERVROU" (Translated)

STD 5 READER (HEIDI)

RES: Heidi, tell me the story in your own words.

HEIDI: The story is about guests invited to dinner by Mrs Cronje. They were all seated at the table and talked about people who gossip about other people, and about who is the best, women or men, and there was an argument about this. And they later left the discussion at that point, and while they were busy, Mrs Cronje called her son and told him to put a dish of milk out on the stoep. Captain Sadie immediately realized there was something wrong and guessed there was something wrong and guessed there was a snake somewhere. He immediately ordered everyone to sit still until he had counted up to three hundred, or he would fine them twenty rands. He counted, and while he was counting, a snake crawled from under the table towards the milk. They asked how he knew there was a snake around and he said..They said he deserved the honour for enticing the snake from under table. But he said the honour should go to Mrs Cronje because she was the one who enticed the snake from under the table. He asked her how she knew there was a snake under the table and she told him that she felt it settle on her left foot. And someone said that they had just argued about the courage of men and women and all of them agreed the women are the winners - they have more courage.

RES: Thank you. Can you tell me in one sentence what the story is all about?

HEIDI: It deals with who has more courage, men or women.

RES: According to the story, who has the most courage?

HEIDI: According to the story....Towards the end of the story, everyone agreed the women have more courage.

RES: You read/.....

RES: You read the story. It does not deal with courage only, but with initiative as well. Who does something when the need arises. Now, the story says the women won. If you were to give a verdict, who, would you say, won?

HEIDI: I would say the women won. Mrs Cronje did not jump on a chair when she felt the snake, but called her son to put milk on the stoep to entice the snake.

RES: Wouldn't you admit that Captain Sadie also contributed?

HEIDI: Yes, he did...If anyone had moved, the snake would have bitten him.

RES: Do you still say Mrs Cronje won?

HEIDI: Yes. The man is brave, but the woman is braver.

RES: Thank you. At the beginning. Where did the discussion take place?

HEIDI: In Mrs Cronje's spacious diningroom.

RES: In other words, they were already at table when the discussion started.

HEIDI: Yes.

RES: Why did Mrs Cronje tell her son to put milk on the stoep?

HEIDI: Milk attracts snakes. She wanted to entice the snake.

RES: Why, do you think, are snakes attracted by milk?

HEIDI: They are attracted by the scent.

RES: The scent? Do they also drink milk?

HEIDI: I think. I'm not sure.

RES: Thank you, Heidi.

APPENDIX VIII.E1

HANS CHRISTIAN ANDERSEN

[1]Andersen is a very common surname in Denmark. [2]There are more Andersens in Denmark than all the Van der Merwes and Smiths in South Africa together. [3]There are even hundreds of people called Hans Christian Andersen. [4]There is, however, only one Hans Christian Andersen who is known over most of the world.

[6]Hans Christian's father was a shoemaker and they were very poor. [7]When Hans Christian was eleven years old, his father died, and the family became even poorer than before. [8]His mother had to wash other people's clothes to get money for food. [9]As Mrs Andersen could no longer afford to send Hans Christian to school, he had to stay at home.

[10]Do not think that Hans Christian Andersen did nothing at home. [11]He made himself a small stage and puppets. [12]Children from near and far came to see his puppet shows. [13]He also read a lot. [14]He read any book he could lay his hands on. [15]His mother was very angry because he spent most of his days reading. [16]She wanted him to become a tailor, but he would not listen to her.

[17]"But, Son," she said, "what are you going to be?"

[18]"I want to be a famous singer, Mother," was his reply.

[19]Hans was fourteen years old when he left home and went to the lady who was then the best singer and dancer in Denmark.

[20]"Lady," he told her, "I want to become a famous singer and dancer. [21]All my life I have wanted to dance and sing. [22]I can do it. [23]Watch ! "

[24]Before she could say anything, Hans started to hit the top of his hat with his fingers as one hits a drum. [25]Then he started

jumping/...

jumping around. [26]The harder he hit his hat, the higher he jumped, and the higher he jumped, the harder he hit his hat.

[27]It must have been a funny sight, this tall, thin young man with his long nose and his big feet, jumping around the room and thumping his hat out of shape !

[28]The lady did not think it funny at all. [29]She was afraid.

[30]"This young man must be mad," she thought. [31]"He must have escaped from a madhouse ! "

[32]"Boy," she said, " you will never be a dancer; your feet are too big. [33]You will never be a singer; your voice is no good ! "

[34]With tears in his eyes, Hans Christian went away.

[35]"If I cannot be a famous dancer, I shall become a famous author," he decided.

[36]He was right, for it was as an author of fairy tales that he became famous.

APPENDIX VIII.E2

1. Chris-
2. /krəstʃɔsən/

HANS CHRISTIAN ANDERSEN

1 [1]Andersen is a very common surname in Denmark. [2]There are
2 more Andersens in Denmark than all the Van der Merwes and
3 Smiths in South Africa together. [3]There are even hundreds
4 of people called Hans Christian Andersen. [4]There is, however,
5 only one Hans Christian Andersen who is known over most of the
6 world.

7 [6]Hans Christian's father was a shoemaker and they were very
8 poor. [7]When Hans Christian was eleven years old, his father
9 died, and the family became even poorer than before. [8]His
10 mother had to wash other people's clothes to get money for
11 food. [9]As Mrs Andersen could no longer afford to send Hans
12 Christian to school, he had to stay at home.

13 [10]Do not think that Hans Christian Andersen did nothing at home.
14 [11]He made himself a small stage and puppets. [12]Children from near
15 and far came to see his puppet shows. [13]He also read a lot.
16 [14]He read any book he could lay his hands on. [15]His mother was
17 very angry because he spent most of his days reading. [16]She ...
18 ... wanted him to become a tailor, but he would not listen to her.
19 [17]"But, Son," she said, "what are you going to be?"
20 [18]"I want to be a famous singer, Mother," was his reply.
21 [19]Hans was fourteen years old when he left home and went to the
22 lady who was then the best singer and dancer in Denmark.
23 [20]"Lady," he told her, "I want to become a famous singer and
24 dancer. [21]All my life I have wanted to dance and sing. [22]I
25 can do it. [23]Watch ! "
26 [24]Before she could say anything, Hans started to hit the top of
27 his hat with his fingers as one hits a drum. [25]Then he started

jumping/...

jumping around. 26The harder he hit his hat, the higher he jumped, and the higher he jumped, the harder he hit his hat. 27It must have been a funny sight, this tall, thin young man with his long nose and his big feet, jumping around the room and thumping his hat out of shape ! 28The lady did not think it funny at all. 29She was afraid. 30"This young man must be mad," she thought. 31"He must have escaped from a madhouse ! "

32"Boy," she said, " you will never be a dancer; your feet are too big. 33You will never be a singer; your voice is no good ! " 34With tears in his eyes, Hans Christian went away.

35"If I cannot be a famous dancer, I shall become a famous author," he decided.

36He was right, for it was as an author of fairy tales that he became famous.

APPENDIX VIII.E3

HANS CHRISTIAN ANDERSEN

[1]Andersen is a very common surname in Denmark. [2]There are more Andersens in Denmark than all the Van der Merwes and Smiths in South Africa together. [3]There are even hundreds of people called Hans Christian Andersen. [4]There is, however, only one Hans Christian Andersen who is known over most of the world.

[6]Hans Christian's father was a shoemaker and they were very poor. [7]When Hans Christian was eleven years old, his father died, and the family became even poorer than before. [8]His mother had to wash other people's clothes to get money for food. [9]As Mrs Andersen could no longer afford to send Hans Christian to school, he had to stay at home.

[10]Do not think that Hans Christian Andersen did nothing at home. [11]He made himself a small stage and puppets. [12]Children from near and far came to see his puppet shows. [13]He also read a lot. [14]He read any book he could lay his hands on. [15]His mother was very angry because he spent most of his days reading. [16]She wanted him to become a tailor, but he would not listen to her.

[17]"But, Son," she said, "what are you going to be?"

[18]"I want to be a famous singer, Mother," was his reply.

[19]Hans was fourteen years old when he left home and went to the lady who was then the best singer and dancer in Denmark.

[20]"Lady," he told her, "I want to become a famous singer and dancer. [21]All my life I have wanted to dance and sing. [22]I can do it. [23]Watch ! "

[24]Before she could say anything, Hans started to hit the top of his hat with his fingers as one hits a drum. [25]Then he started

jumping/...

jumping around. [26]The harder he hit his hat, the higher he jumped, and the higher he jumped, the harder he hit his hat. [27]It must have been a funny sight, this tall, thin young man with his long nose and his big feet, jumping around the room and thumping his hat out of shape ! [28]The lady did not think it funny at all. [29]She was afraid. [30]"This young man must be mad," she thought. [31]"He must have escaped from a madhouse ! " [32]"Boy," she said, " you will never be a dancer; your feet are too big. [33]You will never be a singer; your voice is no good ! " [34]With tears in his eyes, Hans Christian went away. [35]"If I cannot be a famous dancer, I shall become a famous author" he decided. [36]He was right, for it was as an author of fairy tales that he became famous.

APPENDIX VII.E4

HANS CHRISTIAN ANDERSEN

[1]Andersen is a very common surname in Denmark. [2]There are more Andersens in Denmark than all the Van der Merwes and Smiths in South Africa together. [3]There are even hundreds of people called Hans Christian Andersen.[4] There is, however, only one Hans Christian Andersen who is known over most of the world.

[6]Hans Christian's father was a shoemaker and they were very poor. [7]When Hans Christian was eleven years old, his father died, and the family became even poorer than before. [8]His mother had to wash other people's clothes to get money for food. [9]As Mrs Andersen could no longer afford to send Hans Christian to school, he had to stay at home.

[10]Do not think that Hans Christian Andersen did nothing at home. [11]He made himself a small stage and puppets. [12]Children from near and far came to see his puppet shows. [13]He also read a lot. [14]He read any book he could lay his hands on. [15]His mother was very angry because he spent most of his days reading. [16]She wanted him to become a tailor, but he would not listen to her.

[17]"But, Son," she said, "what are you going to be?"

[18]"I want to be a famous singer, Mother," was his reply.

[19]Hans was fourteen years old when he left home and went to the lady who was then the best singer and dancer in Denmark.

[20]"Lady," he told her, "I want to become a famous singer and dancer. [21]All my life I have wanted to dance and sing. [22]I can do it. [23]Watch ! "

[24]Before she could say anything, Hans started to hit the top of his hat with his fingers as one hits a drum. [25]Then he started

jumping/...

jumping around. [26]The harder he hit his hat, the higher he jumped, and the higher he jumped, the harder he hit his hat.
[27]It must have been a funny sight, this tall, thin young man with his long nose and his big feet, jumping around the room and thumping his hat out of shape !
[28]The lady did not think it funny at all. [29]She was afraid.
[30]"This young man must be mad," she thought. [31]"He must have escaped from a madhouse ! "
[32]"Boy," she said, " you will never be a dancer; your feet are too big. [33]You will never be a singer; your voice is no good ! "
[34]With tears in his eyes, Hans Christian went away.
[35]"If I cannot be a famous dancer, I shall become a famous author he decided.
[36]He was right, for it was as an author of fairy tales that he became famous.

APPENDIX VII.E5

HANS CHRISTIAN ANDERSEN

[1]Andersen is a very common surname in Denmark. [2]There are more Andersens in Denmark than all the Van der Merwes and Smiths in South Africa together. [3]There are even hundreds of people called Hans Christian Andersen.[4] There is, however, only one Hans Christian Andersen who is known over most of the world.

[6]Hans Christian's father was a shoemaker and they were very poor. [7]When Hans Christian was eleven years old, his father died, and the family became even poorer than before. [8]His mother had to wash other people's clothes to get money for food. [9]As Mrs Andersen could no longer afford to send Hans Christian to school, he had to stay at home.

[10]Do not think that Hans Christian Andersen did nothing at home. [11]He made himself a small stage and puppets. [12]Children from near and far came to see his puppet shows. [13]He also read a lot. [14]He read any book he could lay his hands on. [15]His mother was very angry because he spent most of his days reading. [16]She wanted him to become a tailor, but he would not listen to her. [17]"But, Son," she said, "what are you going to be?"

[18]"I want to be a famous singer, Mother," was his reply.

[19]Hans was fourteen years old when he left home and went to the lady who was then the best singer and dancer in Denmark. [20]"Lady," he told her, "I want to become a famous singer and dancer. [21]All my life I have wanted to dance and sing. [22]I can do it. [23]Watch ! "

[24]Before she could say anything, Hans started to hit the top of his hat with his fingers as one hits a drum. [25]Then he started

jumping/...

jumping around. [26]The harder he hit his hat, the higher he jumped, and the higher he jumped, the harder he hit his hat. [27]It must have been a funny sight, this tall, thin young man with his long nose and his big feet, jumping around the room and thumping his hat out of shape ! [28]The lady did not think it funny at all. [29]She was afraid. [30]"This young man must be mad," she thought. [31]"He must have escaped from a madhouse ! "

[32]"Boy," she said, " you will never be a dancer; your feet are too big. [33]You will never be a singer; your voice is no good ! " [34]With tears in his eyes, Hans Christian Andersen went away.

[35]"If I cannot be a famous dancer, I shall become a famous author he decided.

[36]He was right, for it was as an author of fairy tales that he became famous.

READING MISCUE INVENTORY CODING SHEET

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APPENDIX IX. E'1: (Acknowledgements to Y. Goodman and C. Burke 1972)

Researcher: J.H. PITT

READER: EUGENE (STD 1) DATE: 12/06/85 STORY: HANS CHRISTIAN ANDERSEN

Total Sentences: 36 Total Words: 430 Total Miscues: 40

Total # Words 430

Total # Miscues 40

MPHW 9,30

NOTES

Line Number	Sentence Number	Miscue Number	READER	TEXT	GRAPHIC (0-3) 1	PHONEMIC (0-3) 2	GRAM FUNC. (0-2) 3	SYN. ACCEPT (0-6) 4	SYN. CHANGE (0-3) 5	SEM ACCEPT (0-6) 6	SEM CHANGE (0-3) 7	CORRECTION (0-3) 8	DIALECT (0-4) 9
4	4	1	$/hʊʊvə/	however	3	3	2	6	3	0	-	0	0
5	4	2	-	is	-	-	-	1	-	1	-	0	0
5	4	3	know	known	3	3	0	2	-	2	-	0	0
7	6	4	Christian	Christian's	3	3	0	1	-	1	-	0	3
8	7	5	$elēvèn /Ilavɛn/	eleven	3	1	2	0	-	0	-	2	0
11	9	6	Miss	Mrs	3	2	1	6	3	1	-	0	3
11	9	7	call	could	1	1	0	0	-	0	-	0	0
13	10	8	/krastʃasan/	Christian	2	2	1	6	3	6	2	0	0
13	10	9	Anders	Andersen	3	3	1	6	3	6	2	0	3
13	10	10	died	did	3	2	1	1	-	1	-	0	0
14	11	11	$/steɪg/	stage	3	2	1	6	3	0	-	0	0
14	11	12	pups	puppets	2	2	1	6	3	0	-	0	3
15	12	13	come	came	3	3	1	6	3	3	1	3	3
15	13	14	/rid/ (read)	read (/rɛd/)	3	2	1	2	-	6	2	0	3
16	14	15	-	his	-	-	-	4	3	4	3	0	0
17	15	16	the	his	0	0	0	4	3	4	3	0	0
18	16	17	will	would	1	1	1	4	3	2	-	0	0
19	17	18	he	she	3	3	1	4	3	1	-	2	0
20	18	19	replay	reply	3	3	1	0	-	0	-	0	0
21	19	20	forty	fourteen	3	3	1	6	3	0	-	1	3
21	19	21	-	the	-	-	-	1	-	1	-	0	0
23	20	22	the	he	0	0	0	1	-	1	-	1	0
24	21	23	be a dancer	dance	2	2	1	4	3	4	3	0	0
27	24	24	finger	fingers	3	3	1	6	3	6	3	0	3
27	24	25	$/hɜts/	hits	3	3	1	6	3	0	-	2	0
28	2	26	hats	hit	2	2	0	0	-	0	-	2	0
28	26	27	he	his	1	1	0	1	-	1	-	0	0
28	26	28	#heeger /hidʒa/	higher	2	2	1	4	3	0	-	2	0
30	27	29	sing	sight	1	1	0	0	-	0	-	2	0
				TOTAL:									
				PERCENT:									

READING MISCUE INVENTORY CODING SHEET

304

APPENDIX IX. E'1: (Acknowledgements to Y. Goodman and C. Burke 1972) continued..

Researcher: J.H. PITT

READER: EUGENE (STD 1) DATE: 12/06/85 STORY: HANS CHRISTIAN ANDERSEN

Total Sentences: 36 Total Words: 430 Total Miscues: 40

Total # Words 430

Total # Miscues 40

MPHW 9,30

NOTES

Line Number	Sentence Number	Miscue Number	READER	TEXT	GRAPHIC (0-3) 1	PHONEMIC (0-3) 2	GRAM FUNC. (0-2) 3	SYN. ACCEPT (0-6) 4	SYN. CHANGE (0-3) 5	SEM ACCEPT (0-6) 6	SEM CHANGE (0-3) 7	CORRECTION (0-3) 8	DIALECT (0-4) 9
32	27	30	jumping	thumping	3	3	1	6	3	0	1	0	0
33	28	31	it	at	3	3	0	0	1	0	1	0	0
33	29	32	$afried	afraid	3	3	1	4	3	0	1	0	0
34	30	33	they	she	0	0	1	6	3	1	1	0	0
34	30	34	throw	thought	1	1	1	0	1	0	1	2	0
35	31	35	$eskept	escaped	3	3	1	4	3	0	1	0	0
37	33	36	not	no	3	3	0	4	3	4	3	0	0
39	35	37	could not	cannot	2	2	1	6	3	6	2	0	0
39	35	38	will	shall	1	1	1	6	3	6	3	0	0
39	35	39	$/aʊθə/	author	2	2	1	6	3	0	1	0	0
40	35	40	decide	decided	3	3	1	1	1	6	3	0	3
				TOTAL:	21	16	25	24	24	11	7	2	
				PERCENT:	52,5	40,0	62,5	60	60	27,5	17,5	5	

READING MISCUE INVENTORY CODING SHEET

APPENDIX IX. E2: (Acknowledgements to Y. Goodman and C. Burke 1972)

Researcher: J.H. PITT

READER: MADELEIN (STD 2) DATE: 12/06/85 STORY: HANS CHRISTIAN ANDERSEN

Total Sentences: 36 Total Words: 430 Total Miscues: 41

Total # Words 430

Total # Miscues 41

MPHW 9,53

NOTES

Line Number	Sentence Number	Miscue Number	READER	TEXT	1 GRAPHIC (0-3)	2 PHONEMIC (0-3)	3 GRAM FUNC. (0-2)	4 SYN. ACCEPT (0-6)	5 SYN. CHANGE (0-3)	6 SEM ACCEPT (0-6)	7 SEM CHANGE (0-3)	8 CORRECTION (0-3)	9 DIALECT (0-4)
1	1	1	surename	surname	3	2	1	4	3	0	-	2	2
1	1	2	surname. The Denmark	surname in Denmark	-	1	0	-	2	1	-	0	0
1	1	3	in	The	0	0	0	0	-	0	-	2	0
4	3	4	/krastasan/	Christian	2	2	1	4	3	4	3	0	0
4	4	5	/haʊva/	however	3	3	2	5	2	0	-	2	0
5	4	6	now	known	2	2	0	1	-	1	-	0	0
9	7	7	become	became	3	2	1	5	3	5	3	0	0
9	7	8	ever	even	2	1	0	2	-	2	-	1	0
9	7	9	poor	poorer	2	2	1	1	-	1	-	0	0
10	8	10	others	other	3	3	0	1	-	1	-	1	0
11	9	11	And	As	1	1	0	5	1	5	2	0	0
13	10	12	you	not	0	0	0	3	1	5	1	1	0
15	12	13	come	came	3	2	1	5	3	5	3	0	3
15	12	14	the	his	0	0	0	5	3	5	3	0	0
15	12	15	puppets.	puppet shows	-	0	0	5	3	5	3	0	0
15	12	16	puppets. show	puppet shows	3	3	1	0	-	0	-	0	0
15	13	17	/rid/ read	/rɛd/ read	3	2	1	2	-	5	3	0	3
16	14	18	-	his	-	-	-	6	2	6	3	0	0
17	15	19	the	his	SEE		#	14					
17	15	20	day	days	2	2	1	6	3	6	3	1	0
18	16	21	went	wanted	1	1	1	1	-	1	-	1	0
19	17	22	,	-	-	-	-	5	3	5	3	0	0
19	17	23	soon	son	3	2	0	1	-	1	-	0	0
19	17	24	he	she	2	1	1	5	3	0	-	2	0
20	18	25	this	his	2	1	0	5	3	3	1	2	0
21	19	26	a	the	0	1	1	6	3	6	3	0	0
26	24	27	stretch	started	1	0	2	2	-	3	2	1	0
27	24	28	on	a	0	0	0	1	-	1	-	0	0
28	26	29	Then	The	3	2	0	0	-	0	-	0	0
				TOTAL:									
				PERCENT:									

READING MISCUE INVENTORY CODING SHEET

APPENDIX IX. E2: (Acknowledgements to Y. Goodman and C. Burke 1972)

CONTINUED

Researcher: J.H. PITT

READER: MADELEIN (STD 2) DATE: 12/06/85 STORY: HANS CHRISTIAN ANDERSEN

Total Sentences: 36 Total Words: 430 Total Miscues: 42

Line Number	Sentence Number	Miscue Number	READER	TEXT	GRAPHIC (0-3) 1	PHONEMIC (0-3) 2	GRAM FUNC. (0-2) 3	SYN. ACCEPT (0-6) 4	SYN. CHANGE (0-3) 5	SEM ACCEPT (0-6) 6	SEM CHANGE (0-3) 7	CORRECTION (0-3) 8	DIALECT (0-4) 9
28	26	30	and	the	0	0	0	2	-	2	-	0	0
29	26	31	on	-	-	-	-	6	1	6	3	0	0
30	27	32	/sIt/	sight	2	2	2	0	-	0	-	0	0
30	27	33	all	tall	2	2	0	0	-	0	-	0	0
30	27	34	thing	thin	3	2	0	0	-	0	-	0	0
30	27	35	your	young	1	1	0	0	-	0	-	0	0
31	27	36	jumped	jumping	2	2	0	5	2	5	3	0	0
34	30	37	she thought "he must...	she thought."He must...	-	-	-	5	3	5	3	0	0
35	31	38	$excaped	escaped	3	3	1	5	3	5	3	0	3
39	35	39	can't	cannot	2	2	1	5	3	5	3	0	4
39	35	40	other	author	2	1	2	1	-	0	-	0	0
40	35	41	decide	decided	3	3	1	5	3	5	3	0	3
41	36	42	$/tellas/	tales	3	2	2	0	-	0	-	0	0
				TOTAL:	13	5	14	6	15	5	16	6	
				PERCENT:	31,7	12,2	34,1	14,6	37,5	12,2	39,0	14,6	

Total # Words: 430

Total # Miscues: 4

MPHW: 9,7

NOTES

READING MISCUE INVENTORY CODING SHEET

APPENDIX IX.E3:

(Acknowledgements to Y. Goodman and C. Burke 1972)

Researcher: J.H. PITT

READER: CARMEN (STD 3) DATE: 12/06/85 STORY: HANS CHRISTIAN ANDERSEN

Total Sentences: 36 Total Words: 430 Total Miscues: 42

Total # Words 430

Total # Miscues 42

MPHW 9,77

NOTES

Line Number	Sentence Number	Miscue Number	READER	TEXT	GRAPHIC (0-3) 1	PHONEMIC (0-3) 2	GRAM FUNC. (0-2) 3	SYN. ACCEPT (0-6) 4	SYN. CHANGE (0-3) 5	SEM ACCEPT (0-6) 6	SEM CHANGE (0-3) 7	CORRECTION (0-3) 8	DIALECT (0-4) 9
1	1	1	is	in	1	1	0	0	-	0	-	0	0
1	2	2	The	There	2	2	0	0	-	0	-	1	3
4	4	3	$oh-ever	however	2	3	2	6	3	6	3	2	0
5	4	4	know	known	3	3	0	0	-	0	-	0	0
7	6	5	there	they	2	3	0	1	-	1	-	1	0
8/9	7	6	-	eleven years...the family	-	-	-	1	-	1	-	0	0
9	7	7	very	-	-	-	-	6	3	6	3	0	0
9	7	8	poor	poorer	3	3	1	6	3	6	2	0	3
10	8	9	over	other	2	1	0	4	3	1	-	0	0
11	9	10	Mrs /mIsas/	Misters /mIstars/	3	3	1	0	-	0	-	1	0
13	10	11	Don't	Do not	2	2	1	6	3	6	3	1	4
13	10	12	Chris	Christian	2	2	1	6	3	6	3	1	4
14	11	13	$pumpets	puppets	3	3	1	4	3	0	-	0	0
15	12	14	come	came	3	2	1	6	2	6	1	0	3
15	12	15	this	his	2	2	0	6	3	6	3	2	0
15	13	16	/rid/ (read)	/red/ (read)	3	3	1	2	-	2	-	0	3
16	14	17	lie	lay	2	2	1	1	-	1	-	2	3
16	14	18	-	his	-	-	-	6	3	6	3	0	2
19	17	19	doing	going	2	2	1	1	-	1	-	0	1
19	17	20	(to) go	(to) be	0	0	1	0	-	0	-	2	0
20	18	21	$farmous	famous	3	3	1	4	3	0	-	0	3
21	19	22	and	when	0	0	0	6	3	6	3	0	0
22	19	23	in	and	1	1	0	1	-	1	-	1	0
23	20	24	$fomous	famous	3	3	1	6	3	0	-	0	3
24	21	25	be	-	-	-	-	1	-	1	-	0	0
26	24	26	he	she	2	2	1	6	3	6	2	0	1
26	24	27	he	Hans	1	1	0	6	3	6	3	0	4
26	24	28	her	hit	1	1	0	1	-	1	-	1	0
27	24	29	/ɛ/	a	2	2	2	6	3	6	3	1	3
				TOTAL:									
				PERCENT:									

APPENDIX IX.E3: **READING MISCUE INVENTORY CODING SHEET**
(Acknowledgements to Y. Goodman and C. Burke 1972)
CONTINUED
Researcher: J.H. PITT

READER: CARMEN (STD 3) DATE: 12/06/85 STORY: HANS CHRISTIAN ANDERSEN

Total Sentences: 36 Total Words: 430 Total Miscues: 42

Total # Words 430
Total # Miscues 42
MPHW 9,77
NOTES

Line Number	Sentence Number	Miscue Number	READER	TEXT	1 GRAPHIC (0-3)	2 PHONEMIC (0-3)	3 GRAM FUNC. (0-2)	4 SYN. ACCEPT (0-6)	5 SYN. CHANGE (0-3)	6 SEM ACCEPT (0-6)	7 SEM CHANGE (0-3)	8 CORRECTION (0-3)	5 DIALECT (0-4)
27	25	30	the	he	2	2	0	1	–	1	–	2	0
28	25	31	this	his	2	2	0	4	3	4	3	2	0
29	26	32	hit	hat	3	3	0	3	1	3	1	1	0
30	27	33	$sayt	sight	3	3	1	6	3	0	–	2	0
31	27	34	the	his	1	1	0	6	3	6	3	1	0
34	30	35	/mʌŋ/	young	2	2	2	6	1	0	–	1	0
34	30	36	this	she	1	1	0	1	–	1	–	1	0
35	31	37	$excaped	escaped	3	3	1	4	3	4	3	0	3
36	32	38	you	your	3	2	0	1	–	1	–	1	0
37	33	39	your	you	3	2	0	1	–	1	–	1	0
39	35	40	$/aθə/	author	2	2	1	4	3	0	–	0	0
40	35	41	decide	decided	3	3	1	6	3	6	3	0	3
41	36	42	any	–	–	–	–	1	–	1	–	0	0
				TOTAL:	14	13	17	23	21	16	13	14	
				PERCENT:	33,3	31,0	40,5	54,8	50	38,1	31,0	33,3	

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APPENDIX IX. E4: **READING MISCUE INVENTORY CODING SHEET**

(Acknowledgements to Y. Goodman and C. Burke 1972)

Researcher: J.H. PITT

READER: ANGELA (STD 4) DATE: 12/06/95 STORY: HANS CHRISTIAN ANDERSEN

Total Sentences: 36 Total Words: 430 Total Miscues: 15

Total # Words 430

Total # Miscues 15

MPHW 3,5

NOTES

Line Number	Sentence Number	Miscue Number	READER	TEXT	1 GRAPHIC (0-3)	2 PHONEMIC (0-3)	3 GRAM FUNC. (0-2)	4 SYN. ACCEPT (0-6)	5 SYN. CHANGE (0-3)	6 SEM ACCEPT (0-6)	7 SEM CHANGE (0-3)	8 CORRECTION (0-3)	9 DIALECT (0-4)
9	7	1	poor	poorer	2	3	1	1	–	2	–	0	3
15	12	2	puppets	puppet	3	3	0	1	–	4	3	0	3
15	13	3	/rid/ (read)	/rɛd/ (read)	3	2	1	2	–	2	–	0	3
16	14	4	–	his	–	–	–	6	3	6	3	0	0
17	15	5	–	very	–	–	–	6	3	6	3	0	0
17	15	6	the	his	1	0	0	6	3	6	3	1	0
22	19	7	–	then	–	–	–	4	3	4	3	1	0
24	21	8	–	have	–	–	–	2	–	2	–	1	0
30	27	9	was	must	0	0	1	1	–	1	–	1	0
30	27	10	be	have	0	0	1	1	–	1	–	1	0
33	28	11	was	–	–	–	–	4	3	4	3	0	0
36	32	12	foot	feet	2	2	1	1	–	1	–	1	0
38	34	13	heart	eyes	0	0	1	0	–	0	–	1	0
39	35	14	became	become	3	2	1	2	–	2	–	0	0
41	36	15	–	as	–	–	–	1	–	1	–	0	0
				TOTAL:	3	2	7	5	5	6	6	7	
				PERCENT:	33,3	22,2	77,7	33,3	33,3	40,0	40,0	46,7	

READING MISCUE INVENTORY CODING SHEET

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APPENDIX IX. ES:

(Acknowledgements to Y. Goodman and C. Burke 1972)

Researcher: J.H. PITT

READER: HEIDI

DATE: 12/06/85

STORY: HANS CHRISTIAN ANDERSEN

Total Words: 430

Total Miscues: 21

Total Sentences: 36

Total # Words 430

Total # Miscues 21

MPHW 4,88

NOTES

Line Number	Sentence Number	Miscue Number	READER	TEXT	1 GRAPHIC (0-3)	2 PHONEMIC (0-3)	3 GRAM FUNC. (0-2)	4 SYN. ACCEPT (0-6)	5 SYN. CHANGE (0-3)	6 SEM ACCEPT (0-6)	7 SEM CHANGE (0-3)	8 CORRECTION (0-3)	9 DIALECT (0-4)
1	1	1	was	is	1	1	1	4	3	4	3	0	3
9	7	2	his	the	0	0	0	6	3	6	3	0	0
9	7	3	poor	poorer	2	2	1	1	-	5	3	0	3
11	9	4	And	As	1	1	0	4	3	4	3	0	0
12	9	5	to school. He had...	to school, he had...	-	-	-	4	2	4	3	0	0
13	10	6	not	nothing	2	1	0	1	-	0	-	1	0
16	14	7	books	book	3	3	1	6	3	6	3	0	1
16	14	8	-	his	-	-	-	6	3	6	3	0	3
19	17	9	to go	going	1	1	1	1	-	0	-	0	0
21	19	10	and	-	-	-	-	1	-	1	-	0	0
22	19	11	dancer in Denmark,	dancer in Denmark.	-	-	-	1	-	1	-	0	0
28	26	12	-	he	-	-	-	1	-	1	-	0	0
30	27	13	I	It's	2	2	1	3	3	0	-	0	0
33	28	14	it's	it	3	3	2	4	3	4	3	0	2
34	30	15	-	young	-	-	-	4	3	4	3	0	0
35	31	16	excaped	escaped	3	3	1	4	3	4	3	0	3
38	34	17	Anderson	-	-	-	-	4	3	4	3	0	0
39	35	18	you could	I cannot	0	0	1	6	3	6	3	1	0
39	35	19	could	cannot									
39	35	20	-	I	-	-	-	1	-	0	-	0	0
41	36	21	-	as	-	-	-	1	-	0	-	0	0
42	36	22	become	became	3	3	1	2	-	6	2	0	3
				TOTAL:	4	4	8	11	11	13	12	2	
				PERCENT:	19,0	19,0	38,1	52,4	52,4	61,9	57,1	9,5	

APPENDIX X. E/1 : RETELLING OF "HANS CHRISTIAN ANDERSEN"

(Translated)

STD 1 Reader (EUGENE = EUG)

RES: ....do you want to tell me the story in Afrikaans or English?

EUG: Afrikaans

RES: In Afrikaans. Good. Now tell me...tell me the whole story. (Long Pause) Who was Hans Christian Andersen, and what did he do?

EUG: He was a...he did.. (Long Pause)

RES: Where did they..In which country did he live?

EUG: Denmark

RES: And...

EUG: His father was a shoemaker, and at his father's death they were very poor. And his mother did not have enough money to buy food and they became poorer and then Hans Andersen started reading and his mother asked him what he wanted to be one day and he said he wanted to be a good singer and dancer. Then he went to Denmark to a woman who could dance and sing well and then said...Then he came there and said he wants to be a good dancer and singer. Then he threw up his hat and started to play the drums, started dancing and singing. When he had finished dancing and singing, the woman said...the woman thought .... the woman asked him if he had grown up in a violent home, and Hans said he was not. And then he said that he...she said his feet were too big and his voice was not very good. And then he went back where he wanted to make a film and he thought he would do better.

RES: Good. It says, "Andersen is a very common surname". What do they mean by "common"?

EUG: Is a very pretty surname.

RES: It says, "He made himself a small stage." Why did Anderson...did he not go to school? I believe he was fourteen years old.

EUG: His mother did not want him to go to school.

RES: Why (not)?

EUG: There was not enough money to buy food and his mother washed clothes for other people.

RES: Now what did he do at home?

EUG.: He started/..

EUG: He started reading books.

RES: He also did something else. (Long Pause) It says, "He made himself a small stage and puppets". What are puppets? (Long Pause) It's not important. What did his mother want him to be? (Long Pause) What work did his father do?

EUG: He was a shoemaker.

RES: And what work did his mother want him to do?

EUG: I suppose he also had to be a shoemaker.

RES: But did he want to become one?

EUG: No

RES: He wanted to be a singer and dancer , isn't it?

EUG: Yes.

RES: Did he become a singer and dancer?

EUG: No, Sir.

RES: Because...(pause) the lady had said he did not have a good voice....

EUG: And his feet were too big.

RES: So what did he become?

EUG: He became an author (given in English).

RES: What is the meaning of "famous"?

EUG: To be good. He was a good author.

RES: Could you read the very last sentence again?

EUG: "He was right, for it was as an author of fairy tales that he become famous."

RES: What is an author? (Long Pause) What are fairy tales?

EUG: It's stories

RES: What type of stories?

EUG: It's illustrated stories. It's stories that he wrote.

RES: Very good, Eugene. Thank you very much.

APPENDIX K.E/2 : RETELLING OF "HANS CHRISTIAN ANDERSEN" (Translation)

STD 2 Reader (MADELEIN = MAD)

RES: Madelein...Would you prefer to tell the story in English or Afrikaans?

MAD: In Afrikaans

RES; Good....

MAD: Hans Christesen Andersen's father was a shoemaker and they were very poor. When he was about eleven years old, his father died and they became poorer and his mother washed other people's clothes. And when he was about fourteen years old, he went to a woman who could teach dancing and he asked her to teach him dancing and singing. Then he started jumping and hitting on his hat and she thought he was mad- he'd run away from a madhouse. Then she said... she chased him away. (Long Pause)

RES: What does it say...what did he become after that? (Long Pause) Did he become something else?

MAD: Yes. (Long pause)

RES: Mmmmm. Now let's see...You read he'd become an "/ɑʊθə/". What is an "/ɑʊθə/"? (Long Pause) You said when his father died, they became poorer. And when he was fourteen years old he wanted to become a dancer. Why did he not go to school? Fourteen is very young?

MAD: They were too poor and his mother did not have any money.

RES: And when he was at home, he had nothing to do. What did he in fact do?

MAD: He made puppets (in English).

RES: Do ycu know what a puppet is? (Long pause) How does one make a puppet?

MAD: You take a doll's head and cloth and you put in your hand.

RES: Good. You know what a puppet is. Some puppets have strings. You must've seen that on TV, isn't it? Now, what did his mother want him to be? (Long pause) You may say in English what work she wanted him to do.

MAD: A tailor

RES: A tailor. Do you/.....

RES: A tailor. Do you know what a tailor is? Do you know someone who is a tailor? (Long Pause) What does a tailor do? (Long Pause) A tailor makes clothes. Now, it says, "I want to become a famous singer and dancer." What is "famous"? (Long Pause) When is someone famous? Do you know of someone who is famous? (Long pause) A famous singer? (Long Pause) Michael Jackson....is he famous?

MAD: Yes

RES: Why do you say he is famous? (Long Pause) Because he sings well?

MAD: Yes

RES: Do many people like him?

MAD: Yes

RES: That is why he is famous. He's a very good singer. It says further on that he became an /əʊθə/ of fairy tales. What are "fairy tales"? (Long Pause) What does one do with fairy tales? (Long Pause). One reads them. A fairy tale is a story. Thank you, Madelein.

APPENDIX X.E/3 RETELLING OF "HANS CHRISTIAN ANDERSEN"

STD 3 Reader (CARMEN = CAR)

RES: Carmen...Are you going to retell the story in English or Afrikaans?

CAR: In English

RES: Good....

CAR: Hans Christian Andersen was a boy of fourteen years old. His father was a shoemaker and his mother washed people's clothes for money for food. His mother wanted him to be a tailor. One day his mother asked him, "What would you like...gonna be?" He said, "I'm gonna be a famous singer and dancer." He went to the lady who was the best singer and dancer and said, "I'm gonna be the best singer and dancer." He jumped higher on his feet and hit his hat and the lady came....(inaudible) and said that he will never become a singer and a dancer. She thought he came from a madhouse. She asked him, "Boy, would you like to be a singer and a dancer?" And he said to her....He would not listen to his mother and came to the lady to learn about singing and dancing (Long Pause).

RES: Did he become a famous singer and dancer?

MAD: No, Sir

RES: What did he do?

MAD: He was a tailor.

RES: Did he become a tailor? (Long Pause) In which country did this family live? Can you remember? (Long Pause) It says, in this country Andersen is a very common surname. What does it mean when it is said it is very common?

MAD: They haven't got money for food.

RES: Good. At home, Andersen made "pumpets" (that's how the reader says it). Is it "pumpets"?

MAD: Yes.

RES: What are "pumpets"? (Long Pause) Do you know? (Pause) No? His mother wanted him to become a tailor. What is a tailor? (Pause) What does a tailor do? (Long Pause) Do you know someone who is a tailor?

MAD: No.

RES: Oh.. It says/...

RES: Oh...It says here he wanted to become a famous singer. What does "famous" mean? (Long Pause). Do you know someone who is a famous singer? (Long Pause)

MAD: No.

RES: It says Hans Andersen wrote tales. Do you know what fairy tales are? (Long Pause) Who reads fairy tales? (Pause) Name one fairy tale. (Long Pause)

MAD: "The Old Man in the Moon..." (inaudible)

RES: Good, good. So you know what fairy tales are. Thank you very much, Madelein.

APPENDIX X.E/4: RETELLING OF "HANS CHRISTIAN ANDERSEN"

STD 4 Reader (ANGELA = ANG)

RES: Angela....Could you tell me the story?

ANG: Hans Andersen was eleven years old when his father died and then his...they were poorer than before. His mother did other people's washing to earn money to buy food. And Hans Christian Andersen made himself a stage and had puppet shows. Children from near and far came to see the puppet shows and his mother.... He read a lot and his mother said he shouldn't read so much because she wanted him to earn money and he had to...She wanted him to become a tailor and he said..he told her,"But, Mother, I want to be a famous singer and dancer", but his mother said... When he was fourteen years old he left home and went to the lady who was the best singer and dancer in Denmark. When he came there, he told her, "Lady, I want to be a famous singer and dancer." Before she could answer, he hit his hat on his head and started dancing. He jumped. The higher he jumped, the harder he hit his hat. The harder he hit his hat, the higher he jumped, but when she saw...It was funny, but she didn't see it as funny, because his feet were too big and his voice wasn't very good, and she thought he had escaped from a madhouse and she told him that he couldn't be a dancer and a singer because he had too big feet and his voice was no good. So he decided to be a famous author.

RES: What is the story about? Does it tell you something... a message.

ANG: Yes. Hans did not listen to his mother

RES: How common is the surname Andersen in Denmark?

ANG: The surname Andersen is very common in Denmark.

RES: Can you compare it with any other surnames?

ANG: Van der Merwes and Smiths.

RES: In which country?

ANG: In Denmark - In South Africa.

RES: Why did...At what age did Andersen leave school?

ANG: At 11 years old.

RES: Why did he /.....

RES: Why did he leave school?

ANG: Because his father died and they were poorer than ever before.

RES: What did his mother want him to become?

ANG: His mother wanted him to become a tailor.

RES: What did he become in the end?

ANG: He became an author.

RES: What is an author?

ANG: An author is somebody who writes fairy tales and books.

RES: What are fairy tales?

ANG: Fairy tales are stories.

RES: Thank you, Angela.

APPENDIX X.E/5: RETELLING OF "HANS CHRISTIAN ANDERSEN"

STD 5 Reader (HEIDI)

RES: Heidi...Could you retell the story in your own words without looking at the page?

HEIDI: Hans Christian Andersen went to school, but later they were...they were more...They lived in Denmark. There were more Christian Andersens in the whole.... There were less Christian Andersens than the Van der Merwes and Smiths in the whole South Africa. When Hans was eleven, his father died and they became even more poorer. His mother had to wash other people's clothes to get money for food. Later his mother could not afford to send him to school anymore, so he had to stay at home. But Hans didn't do nothing at home. His mother wanted him to become a tailor, but he wanted to become a famous singer and dancer. He spent most of his time reading books. One day Hans decided to go to the best singer and dancer in that country. It was a lady. He went to this lady and told her he wanted to become a singer and dancer and he wanted to become famous. Before the lady could say anything, he started to dance and sing and tapped on his hat and jumped in the air andthis lady just stared at him. When he had finished, the lady said to him he would never be...he would never....fulfill his dream because his feet were too big and he didn't have a voice that sounded beautiful, and he was very sad. So he decided to become something else to have...to be ...to change his reputation and decided to become an author. In the end that is what he became. He became an author at last.

RES: How old was he when he left school?

HEIDI: Fifteen....Twelve years or so

RES: But that is very young...Why did he have to leave school?

HEIDI: His mother could not afford to send him to school anymore because they became poorer.

RES: Now tell me...Whether Hans went to school or stayed at home, it wouldn't have cost more...I don't think they paid to go to school...Isn't there another reason why she wanted him to stay out of school?

HEIDI: She wanted him to go look for work so that he could help to buy food and she could buy him clothes to go to school.

RES: Did she want him to do just any work?

HEIDI: No, She /....

HEIDI: No, She wanted him to become a tailor.

RES: What is a tailor?

HEIDI: A tailor is a person who makes clothes, suits, and so on.

RES: But what did he do instead?

HEIDI: He read books....any books he could lay hands on.

RES: Didn't he do something else instead? (Long Pause) Do you remember there was a stage?

HEIDI: He made puppets and children came to see his puppets from near and far..

RES: Do you know what puppets are?

HEIDI: Puppets are just dolls made out of pieces of material... You play with dolls.

RES: You play with them, like girls play with them?

HEIDI: Ha ! Ha ! They hang them with pieces of string and pull them to make them dance..

RES: So he went to this lady, and you said he started hitting his hat. Now what did the lady think when she saw this?

HEIDI: She didn't think it was funny at all. She thought he was mad and he had escaped from the madhouse.

RES: She didn't think it was funny. How did she feel?

HEIDI: She felt it was no good to dance like that. She just felt he could never be a dancer and a famous singer.

RES: Why not?

HEIDI: Because he wasn't good at it. He wanted people to think he's funny.

RES: Was Hans happy when she said he couldn't dance?

HEIDI: No. He was very sad when she said these words to him. It says so in the last paragraph or so.

RES: ...So he said, "If I cannot be a famous dancer,..." what would he become?

HEIDI: An author.

RES: Do you know what an author is?

HEIDI: Yes, /.....

HEIDI: Yes, it's a person who writes books.

RES: What type of books did Hans write?

HEIDI: Children's fairy tales.

RES: What are fairy tales?

HEIDI: Not true stories.

RES: There is something else that makes fairy stories fairy stories.

HEIDI: Stories written for children about fairies.

RES: It says he became a famous author. What does famous mean?

HEIDI: People all over the world know you.

RES: Good. What does this story tell us?

HEIDI: You must have something to fight for.

RES: Good...Thank you, Heidi.

APPENDIX XI A : ANSWER SHEET - A- TEST

ANTWOORDBLAD

SUB-TOETS I

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

SUB-TOETS II

11.	A	B	C	D
12.	A	B	C	D
13.	A	B	C	D
14.	A	B	C	D
15.	A	B	C	D
16.	A	B	C	D
17.	A	B	C	D
18.	A	B	C	D
19.	A	B	C	D
20.	A	B	C	D

SUB-TOETS III

21.	A	B	C	D	E	F	G	H	I	J
22.	A	B	C	D	E	F	G	H	I	J
23.	A	B	C	D	E	F	G	H	I	J
24.	A	B	C	D	E	F	G	H	I	J
25.	A	B	C	D	E	F	G	H	I	J

SUB-TOETS IV

26.	6	16	27	32	42	51	66	71	75	80	84	100	113	133	140
27.	6	16	27	32	42	51	66	71	75	80	84	100	113	133	140
28.	6	16	27	32	42	51	66	71	75	80	84	100	113	133	140
29.	6	16	27	32	42	51	66	71	75	80	84	100	113	133	140
30.	6	16	27	32	42	51	66	71	75	80	84	100	113	133	140
31.	6	16	27	32	42	51	66	71	75	80	84	100	113	133	140
32.	6	16	27	32	42	51	66	71	75	80	84	100	113	133	140
32.	6	16	27	32	42	51	66	71	75	80	84	100	113	133	140
33.	6	16	27	32	42	51	66	71	75	80	84	100	113	133	140
34.	6	16	27	32	42	51	66	71	75	80	84	100	113	133	140
35.	6	16	27	32	42	51	66	71	75	80	84	100	113	133	140

NAAM

SUB-TOETS V

36. W V

37. W V

38. W V

39. W V

40. W V

41. W V

42. W V

43. W V

44. W V

45. W V

SUB-TOETS VI

bilharzia is 'n siekte wat òf die ingewande òf die blaas aantas dit veroorsaak swakheid lusteloosheid 'n afname van die liggaamsmassa en bloedarmoede bilharzia word versprei deur klein slakkies wat die bilharzialarwes huisves en mettertyd uitskei hierdie klein onsigbare bilharziadraers vind 'n menslike gasheer hulle beland in die bloedstroom beweeg deur die hart en longe om sodoende na die verskillende organe meegevoer te word.

SUB-TOETS VII

51. 1 2 3 4

52. 5 6 7 8

53. 9 10 11

54. 12 13. 14 15 16

55. 17 18 19

SUB-TOETS VIII

56. A B C D

57. A B C D

58. A B C D

59. A B C D

60. A B C D

APPENDIX XII .A : THE A-TEST

SUB-TOETS I

Op die antwoordblad, skryf neer gepaste woorde vir die oop ruimtes:

DIE ONTSTAAN VAN ROME

Die verhaal van die ontstaan van Rome word vertel in die ou legende van Romulus en Remus.

Uit vrees dat een van die tweeling sy plek__1__ koning sou oorneem, het 'n wrede koning beveel dat __2__ in die Tiberrivier verdrink moes word. Sy bediende het __3__ tweeling in 'n mandjie op die rivier laat dryf. Die __4__ beland toe in 'n grot van 'n wyfiewolf wie __5__ kleintjies kort tevore deur 'n jagter gedood is. Die __6__ het die tweeling oorgeneem en grootgemaak. 'n Skaapwagter __7__ die tweeling naby die grot gevind en hulle na sy vrou __8__. Sy het hulle Romulus en Remus genoem.

Toe hulle __9__ was, het hulle besluit om 'n stad van hul eie __10__ die plek waar die wolfmoeder hulle gevoed het, te bou. Die standbeeld van Romulus en Remus saam met die wolfmoeder is vandag 'n baie opvallende beeldhouwerk in Rome.

(Adapted from Primêre Geskiedenis 3)

SUB-TOETS II

Lees die onderstaande stuk:

WATER

Water is 'n onontbeerlike stof. Plante, diere en mense het dit nodig en baie fabrieksprosesse is daarvan afhanklik.

Sekere dele van Suid-Afrika kry normaalweg genoeg reën. In die ooste van die land val daar meer as 500mm reën jaarliks. Hier voorsien die reën genoeg water vir baie soorte landbougewasse, maar damme word ook gebou om water vir droë seisoene op te gaar.

In die sentrale en westelike dele van Suid-Afrika is daar nie genoeg reën vir die plase, myne, dorpe en stede nie. Ander waterbronne word gebruik om die reenwater aan te vul. Hier is 'n paar van hulle:

BOORGATE word geboor na die rotslae wat water bevat. Windpompe bring die water na die oppervlak.

FONTEINE is natuurlike waterbronne. Party fonteine lewer water om in die behoeftes van groterige dorpe en hul omringende plase te voorsien.

RIVIERE wat in die nat oostelike dele van Suid-Afrika hulle oorsprong het en wat deur die droë westelike dele vloei, is op verskillende plekke opgedam.

(Adapted from Die Wêreld Rondom Ons 3)

SUB-TOETS II

Vir die onderstreepte woorde, dui aan op die antwoordblad die keuse wat naasteby korrek is:

11. Die woord onontbeerlike beteken dieselfde as:
    A aanhoudende
    B vloeibare
    C noodsaaklike
    D beweeglike

12. Die woord fabrieksprosesse beteken die teenoorgestelde van:
    A werkersgeleenthede
    B natuurprosesse
    C meganiese prosesse
    D materiale

13. Die woord normaalweg beteken dieselfde as:
    A nooit
    B dikwels
    C meer as
    D gewoonlik

14. Landbougewasse is:
    A plaaswerkers
    B skoonmaakgeriewe
    C plante wat boere kweek
    D materiaal om wonings op te rig

15. Die woord sentrale beteken:
    A middel
    B oostelike
    C onderste
    D boonste

16. Waterbronne is plekke waar water:
    A aangetref word
    B opgegaar word
    C gebruik word
    D verlore gaan

SUB-TOETS II VERVOLG

17. Die woord oppervlak beteken die teenoorgestelde van:
    A kante
    B kanale
    C landerye
    D diepte

18. Die woord behoeftes beteken dieselfde as
    A armoede
    B gebreke
    C benodigdhede
    D dors

19. Die woord omringende beteken dieselfde as:
    A nabygeleë
    B ronde
    C vrugbare
    D klein

20. Die woord oorsprong beteken dieselfde as:
    A vloei
    B lope
    C mondings
    D ontstaan

SUB-TOETS III

Kies uit die woorde (A tot J) onderaan die stuk, n woord wat in die oop ruimtes pas. Dui die keuse op die antwoordblad aan.

LUG

Die suurstof in die lug is noodsaaklik vir asemhaling. As mense, plante en diere asemhaal, ___21___ word die voedsel wat deur hulle geëet of opgeneem is, "verbrand". Asemhaling is ___22___ net n besonderse manier waarop voedsel in die liggame van mense en diere, ___23___ in plante verbrand word. ___24___ asemhaling word warmte of energie vrygestel wat ons help om te kan beweeg en ons werk te doen.

Die suurstof in die lug is noodsaaklik vir asemhaling. ___25___ is lug noodsaaklik vir die lewe van mense, diere en plante.

(Adapted from Algemene Wetenskap vir Vandag 3)

A want
B daarom
C toe
D gedurende
E maar
F dan
G sodat
H omdat
I asook
J dus

SUB-TOETS IV

Bestudeer die onderstaande Inhoud:

(From Ons Moedertaal St. 3)

SUB-TOETS IV

Op die antwoordblad, dui aan op watter bladsy jy sal lees oor:

26 'n plaasdier

27 'n snaakse beroep

28 'n noue ontkoming

29 'n wonderlike diertjie

30 'n groot leier in die geskiedenis

31 'n dier wat net in Australië voorkom

32 mense wat in ons land kom woon het

33 planne vir die toekoms

34 dapper mans

35 mense wat by die Noordpool woon

SUB-TOETS V

In die leesboek is 'n interessante storie oor vlermuise. Raai of die volgende stellings oor vlermuise waar (W) of vals (V) is, en dui die keuse aan op die antwoordblad.

36 Vlermuise lyk soos muise met vlerke

37 As jy 'n vlermuis in 'n yskas toemaak, is hy die volgende dag dood

38 'n Vlermuis se hart klop eenhonderd en tagtig keer per minuut

39 Vlermuise lewe net 'n jaar lank

40 Die vlermuis-ma kry baie kleintjies per jaar

41 Vlermuis-pa's is naby wanneer die kleintjies gebore word

42 Vlermuis-kleintjies word in donker geboue gebore

43 Vlermuise vlieg teen mekaar vas in die donker grotte

44 Daar is meer as duisend soorte vlermuise

45 Vlermuise slaap in die winter

(Based on Die Vlermuis in Lentereeks St. 3)

SUB-TOETS VI

Op die antwoordblad is 'n paragraaf wat uit vyf sinne bestaan, waarvan hoofletters, kommas en punte verwyder is. Bring die hoofletters, kommas en punte op die antwoordblad aan.

SUB-TOETS VII

In elkeen van die vyf paragrawe hieronder is n sin wat nie daarin pas nie. Op die antwoordblad, dui hierdie sinne aan:

LUGVERVOER

51 [1]Baie honderde jare gelede is in die Ooste die verhaal vertel van n wonderlike towermat wat die prinses van Bagdad deur die lug vervoer het. [2]Oosterse matte is baie kunstig en uiters duur. [3]Die begeerte om in die lug te oorwin, het maar n droom gebly. [4]Vandag egter vlieg die mens oor berge, woestyne en oseane in sy vliegtuig.

52 [5]n Veer is baie lig en sweef op die bries. [6]Die mens het eers gepoog om n vaartuig te bou wat ligter is as lug. [7]Op 21 November 1783 vlieg die twee Fransmanne, De Rozier en D'Arlandes, in hul Montgolfier-ballon vir 25 minute oor Parys. [8]Hulle was die eerste mense om te vlieg.

53 [9]Die eerste vaartuig om passasiers to vervoer is ontwerp deur die Duitser, graaf Zeppelin. [10]Gedurende die eerste Wêreld-oorlog het die Duitsers selfs stede vanuit lugskepe gebombardeer. [11]Dis glad nie aangenaam as bomme uit die lug op jou neerreën nie

54 [12]Die ligter-as-lug-vaartuig was egter nog nie die antwoord op die mens se strewe om die lugruim te oorwin nie. [13]Die swaarder-as-lug-vaartuig het die era van die lugvaart ingelei. [14]Swaar vaartuie kan onmoontlik in die lug bly. [15]Die mens het eers geëksperimenteer met sweeftuie. [16]Die Duitser, Otto Lilienthal het, bv. baie sweeftogte in sy sweeftuig onderneem.

55 [17]Orville en Wilbur Wright van Amerika het hul sweeftuig aange-dryf met n klein petrolenjin. [18]Die Amerikaners vervaardig vandag reuse straaljagters. [19]Op 17 Desember 1903 het Orville die eerste suksesvolle vliegrit op die strand naby Kitty Hawk, Noord-Carolina uitgevoer.

(Adapted from Primêre Geskiedenis 3)

SUB-TOETS VIII

Lees die onderstaande stuk:

n Snaakse Geselsery

[1]n Nuwe motor -- een van daardie groot, blink swartes -- jaag op n goeie dag n ossewa -- een van daardie weiniges wat nog oorgebly het -- van agter af in. [2]Toe hy regoor die ossewa kom, hou hy stil, begin skaterlag en met die ossewa korswel:

Die motor: [3]Ek sê, Oom Trapsoetjies, waarom dan tog so vinnig ry ? [4]Netnou is daar n vreeslike ongeluk. [5]Of wil Oom n snelheidsrekord opstel ?

Die Ossewa: [6]Môre, Windlawaai! [7]Wat raas jy so ? [8]Dis ook dié dat die mense sê hoe meer lawaai, hoe minder wol. [9]Jy jaag en jaag en gee jou baas geen tyd om te dink nie. [10]Kyk hoe lekker sit my baas op die voorkis aan sy pyp en suig. [11]Hy dink ver as hy so sit -- nes die Voortrekkers.

Die motor: [12]Aag! die ouderwetse oom van my. [13]Hy laat my skoon maagpyn kry. [14]Dink en dink en dink. [15]n Mens moet nie dink nie; jy moet werk en jaag om geld te verdien.

Die ossewa: [16]Jaag en geld verdien! [17]Julle jaag en verdien baie geld, maar die snaaksste vir my is dat julle nooit iets besit nie. [18]Dit lyk my julle jaag die geld uit die mense se sakke uit.

Die motor: [19]Nee, wag, hier trek ek. [20]Ek het nou genoeg van ou mense se kletspraatjies.

Die ossewa: [21]Ja, daar trek hy. [22]Pas net op dat jy nie iemand se nek breek nie en dit van blote geldgierigheid.

(Daar trek die motor, maar veels te vinnig pyl hy op die skielike draai af. n Harde slag -- en daar lê hy met sy vier wiele in die lug.)

Die ossewa: [23]Ek sê mos jaag en jaag en jaag -- na jou dood toe!

(From Ons Moedertaal St. 3)

SUB-TOETS VIII

Dui op die antwoordblad aan, die funksie van elkeen van die volgende sinne:

56. In sin 3 _____ die motor die ossewa.
   A groet
   B bespot
   C waarsku
   D prys

57. In sin 7 is die ossewa _____.
   A tevrede
   B verergd
   C grappig
   D ongeduldig

58. In sin 10 is die ossewa _____.
   A ontevrede
   B tevrede
   C snaaks
   D vriendelik

59. In sin 22 sê die ossewa ons moet _____.
   A jaag
   B ons nekke breek
   C nie geldgierig wees nie
   D geduldig wees

60. In sin 23 _____ die ossewa.
   A spot
   B treur
   C waarsku
   D raas

APPENDIX XIIIA : HIERARCHICAL FREQUENCY DISTRIBUTION

	Testee	Std	Score
1.	Conrad	St.4	51
2.	Carmen	" 5	47
3.	Liesl	" 5	47
4.	Eugene J.	" 5	45
5.	Sihaam	" 4	44
6.	Gillian	" 4	43
7.	Penelope	" 3	43
8.	Shamela	" 5	42
9.	Vanessa	" 5	42
10.	Fabian	" 5	41
11.	Angela	" 4	39
12.	Lettie	" 3	39
13.	Cynthia	" 4	38
14.	Heidi	" 5	38
15.	Nazlie	" 5	37
16.	David	" 3	36
16.	Gerard	" 4	36
16.	Ulrica	" 5	36
19.	Asraf A	" 5	35
20.	Charmaine	" 4	34
20.	Donovan M	" 3	34
22.	Ashraf	" 3	33
22.	Errol	" 3	33
22.	Marius	" 4	33
25.	Carmen	" 3	31
25.	Ramleigh	" 5	31
27.	Gaynor	" 3	30
28.	Gustin	" 3	25
29.	Carol	" 2	24
29.	Crystal	" 3	24
29.	Phillistene	" 3	24
32.	Beryl	" 2	22
33	Harlon	" 2	21
34.	Marilyn	" 2	21
35.	Jessica	" 2	20
36.	Lyndon	" 2	18
36.	Madelein	" 2	18
38.	Benito	" 2	16
39.	Bassidine	" 2	14
40.	Jill	" 1	12
41.	Lucresha	" 1	11
42.	Rochelle	" 1	10
42.	Yassiem	" 1	10
44.	Bernadette	" 1	9
45.	Nicolette	" 1	8
45.	Oriele	" 2	8
45.	Rodney	" 1	8
48.	Donovan	" 1	7
48.	Janine	" 1	7
50.	Eugene	" 1	6

N = 1381

m = 27,62

APPENDIX XIV. A: STANDARD DEVIATION AND RELIABILITY

STANDARD DEVIATION

Score	Mean	d	d^2
51	27,62	23,38	546,62
47	"	19,38	375,58
47	"	19,38	375,58
45	"	17,38	302,06
44	"	16,38	268,30
43	"	15,38	236,54
43	"	15,38	236,54
42	"	14,38	206,78
42	"	14,38	206,78
41	"	13,38	179,02
39	"	11,38	129,50
39	"	11,38	129,50
38	"	10,38	107,74
38	"	10,38	107,74
37	"	9,38	87,98
36	"	8,38	70,22
36	"	8,38	70,22
35	"	8,38	70,22
35	"	7,38	54,46
34	"	6,38	40,70
34	"	6,38	40,70
33	"	5,38	28,94
33	"	5,38	28,94
33	"	5,38	28,94
31	"	3,38	11,42
31	"	3,38	11,42
30	"	2,38	5,66
25	"	2,62	6,86
24	"	3,62	13,10
24	"	3,62	13,10
24	"	3,62	13,10
21	"	6,62	43,82
21	"	6,62	43,82
20	"	7,62	58,06
18	"	9,62	92,54
18	"	9,62	92,54
16	"	11,62	135,02
14	"	13,62	185,50
12	"	15,62	243,98
11	"	16,62	276,22
10	"	17,62	310,46
10	"	17,62	310,46
9	"	18,62	346,70
8	"	19,62	384,94
8	"	19,62	384,94
8	"	19,62	384,94
7	"	20,62	425,18
7	"	20,62	425,18
6	"	21,62	467,42

Total 8 615, 98

$$\text{s.d.} = \sqrt{\frac{8\,615}{50}}$$

$$= \sqrt{172,3}$$

$$= 13,13$$

Reliability: r_{11}

$$= \frac{N}{N-1}\left(1 - \frac{m(N-m)}{Nx^2}\right)$$

$$= \frac{50}{50-1}\left(1 - \frac{27,62\,(50-27,62)}{50 \times 172,3}\right)$$

$$= \frac{50}{49}\left(1 - \frac{27,62 \times 22,38}{8615}\right)$$

$$= 1,02\left(1 - \frac{618\,14}{8615}\right)$$

$$= 1,02\ (1 - 0,07)$$

$$= 1,02 \times 0,93$$

$$= 0,95$$

APPENDIX XVA: ITEM DIFFICULTY AND DISCRIMINATION / A-TEST

= UPPER 27 (14)
= LOWER 27 (14)
= CORRECT U + CORRECT L / 28
= CORRECT U - CORRECT L / 14

ITEM	U	L	U + L	FV	U-L	D
1	13	7	20	0,71	6	0,43
2	13	4	17	0,61	9	0,64
3	12	6	18	0,64	6	0,43
4	8	4	12	0,43	4	0,29
5	11	0	11	0,39	11	0,79
6	14	1	15	0,54	13	0,93
7	14	3	17	0,61	12	0,86
8	14	9	23	0,82	5	0,36
9	12	8	20	0,71	4	0,29
10	12	1	13	0,46	11	0,79
11	A 3 B 3 *C 11 D 1	A 3 B 3 C 5 D 0	12	0,42	2	0,14
12	A 0 *B 8 C 3 D 3	A 4 B 2 C 7 D 1	10	0,36	6	0,42
13	A 0 B 2 C 0 *D 12	A 2 B 7 C 0 D 5	17	0,61	7	0,50
14	A 2 B 0 *C 11 D 1	A 2 B 5 C 4 D 3	15	0,54	7	0,50
15	*A 10 B 4 C 0 D 0	*A 2 B11 C 0 D 1	12	0,43	8	0,57
16	*A 3 B 7 C 3 D 0	*A 6 B 3 C 2 D 1	9	0,32	-3	0,21
17	A 3 B 0 C 2 *D 9	A 3 B 4 C 5 *D 2	11	0,39	7	0,50
18	A 1 B 1 *C 11 D 1	A 4 B 4 *C 1 D 5	12	0,43	10	0,71
19	*A 2 B 11 C 0 D 0	*A 1 B 1 C 1 D 10	3	0,11	1	0,07
20	A 4 B 1 C 1 *D 8 B=1 J=3	A 7 B 2 C 5 *D 0	8	0,29	8	0,57
21	*F 10	*F 3	13	0,46	7	0,50
22	*J 7	*J A=5 B=2 D=2 E=1 I=3 F=2	13	0,46	11	0,79
23	*I 12	*I A=4 B=1 D=3 G=3 H=2	13	0,46	11	0,79
24	* D 14	*D A=3 B=2 E=1 F=2 H=3 I=2	15	0,54	13	0,93
25	*J 14	A=2 9B=4 F=1 I=2 J=5	23	0,82	5	0,36
26	14	1	15	0,54	13	0,93
27	13	2	15	0,54	11	0,79
28	11	2	13	0,46	9	0,64
29	10	0	10	0,36	10	0,71
30	10	1	11	0,39	9	0,64
31	12	0	12	0,43	12	0,86
32	14	0	14	0,5	14	1,00
33	12	0	12	0,43	12	0,86
34	10	1	11	0,39	9	0,64
35	14	0	14	0,50	14	1,00
36	10	8	18	0,64	2	0,14
37	7	0	7	0,25	7	0,50
38	4	1	5	0,18	3	0,21
39	11	4	15	0,54	7	0,50
40	11	0	11	0,39	11	0,79
41	10	5	15	0,54	5	0,36
42	9	5	14	0,50	4	0,29
43	11	5	16	0,57	6	0,43
44	4	3	7	0,25	1	0,07
45	10	2	12	0,43	8	0,57
46	10	0	10	0,36	10	0,71
47	12	0	12	0,43	12	0,85
48	10	0	10	0,36	10	0,71
49	11	0	11	0,39	11	0,79
50	11	0	11	0,39	11	0,79
51	11	5	16	0,57	6	0,43
52	9	1	10	0,36	8	0,57
53	12	2	14	0,50	10	0,71
54	3	1	4	0,14	1	0,07
55	13	6	19	0,68	9	0,64
56	12	0	12	0,43	12	0,86
57	8	2	10	0,36	6	0,43
58	5	2	7	0,25	3	0,21
59	0	0	0	0	0	0
60	8	0	8	0,29	8	0,57

APPENDIX XVI E : ANSWER SHEET/ E-TEST

SUB-TEST 1

1. was
2. he
3. of
4. earth | world
5. would
6. this | his
7. country
8. and
9. he
10. husband

SUB-TEST II

11.	A	B	(C)	D
12.	(A)	B	C	D
13.	A	B	C	(D)
14.	A	B	(C)	D
15.	A	(B)	C	D
16.	(A)	B	C	D
17.	A	(B)	C	D
18.	A	B	C	(D)
19.	(A)	B	C	D
20.	A	B	(C)	D

SUB-TOETS III

21.	A	B	C	D	E	F	G	(H)	I	J
22.	A	B	C	(D)	E	F	G	H	I	J
23.	A	B	C	D	E	F	G	H	I	(J)
24.	(A)	B	C	D	E	F	G	H	I	J
25.	A	B	C	D	E	(F)	G	H	I	J

SUB-TEST IV

26.	1	6	11	23	40	45	50	55	60	65	(76)	82	87	93	98	104
27.	1	6	11	23	(40)	45	50	55	60	65	76	82	87	93	98	104
28.	1	6	11	23	40	45	50	(55)	60	65	76	82	87	93	98	104
29.	(1)	6	11	23	40	45	50	55	60	65	76	82	87	93	98	104
30.	1	6	11	23	40	45	50	55	(60)	65	76	82	87	93	98	104
31.	1	6	11	23	40	(45)	50	55	60	65	76	82	87	93	(98)	104
32.	1	6	11	23	40	45	50	55	60	65	76	82	87	93	98	104
33.	1	6	(11)	23	40	45	50	55	60	65	76	82	87	93	98	104
34.	1	6	11	23	40	45	(50)	55	60	65	76	82	87	93	98	104
35.	1	6	11	23	40	45	50	55	60	65	76	82	(87)	93	98	104

APPENDIX

APPENDIX VI E CONT.

SUB-TEST V

36. T F
37. T F
38. T F
39. T F
40. T F
41. T F
42. T F
43. T F
44. T F
45. T F

SUB-TEST VI

46. The clean fresh air is easily polluted by gases or other impurities which should not be inhaled . 47. Examples of impurities are dust, smoke, soot, poisonous gases and germs. 48. The solids such as dust and soot are dangerous. 49. They do not only damage the delicate air sacks of the lungs. 50. Germs can easily cling to them as well.

SUB-TEST VII

51. 1 2 3
52. 4 5 6 7
53. 8 9 10 11
54. 12 13 14 15
55. 16 17 18

SUB-TEST VIII

56. A B C D
57. A B C D
58. A B C D
59. A B C D
60. A B C D

APPENDIX XVII E : THE E - TEST

SUB-TEST I

On the answer sheet, write down appropriate words for the blank spaces:

CHRISTOPHER COLUMBUS

Christopher Columbus was born in Genoa in Italy in 1446. From an early age he longed to undertake sea-voyages. He ___1___ so interested in the adventures of sailors that ___2___ studied sea-charts till late at night. As a result ___3___ his studies he came to the conclusion that the ___4___ must be round and that by sailing westward one ___5___ reach the East. His greatest desire was to prove ___6___ theory.

For seven long years he moved from one ___7___ to the next in search of aid. These included Spain ___8___ England. Finally ___9___ impressed Queen Isabella of Spain so much that she persuaded her ___10___, King Ferdinand, to help Columbus.

On 3 August 1492 he left Spain with three small ships to venture into the unknown parts of the Atlantic Ocean.

(Adapted from Primary History 3)

SUB-TEST II

Read the following passage

MILK

Because milk spoils so fast, cleanliness and speed are essential in working with it. The stalls of the cows, as well as the cows themselves, are cleaned daily. Milking is done mechanically and the processing of the milk is also done by machines. As far as possible, the handling of milk by human hands is avoided. The machines are sterilised daily.

From time to time the cows are injected against diseases. In this way an attempt is made to keep the milk germ free.

The fresh milk is transported to the factories or the consumers as quickly as possible. An effective means of refrigeration, transport, and handling is therefore essential. Large firms which transport milk in bulk, today control the milk industry. The fresh milk is treated at a central depot, placed in bottles or other containers, and distributed.

(From Primary Geography 3)

SUB-TEST II

The questions refer to the underlined words. Indicate, on the answer sheet, the choice that is most appropriate.

11. The word spoils means the same as:
    A cools
    B sweetens
    C rots
    D disappears

12. The word essential means the same as:
    A necessary
    B useless
    C expected
    D easy

13. The word mechanically means the opposite of:
    A in the morning
    B with machines
    C with speed
    D by hand

14. The word processing means the same as:
    A pouring
    B transport
    C treatment
    D sale

15. The word human means:
    A dirty
    B people's
    C cold
    D many

SUB-TEST II continued

16. The word sterilised means:
    A steamed
    B oiled
    C filled
    D emptied

17. The word diseases means the opposite of:
    A death
    B health
    C medicines
    D injuries

18. Consumers are:
    A markets
    B dairies
    C depots
    D users

19. Refrigeration means:
    A cooling
    B delivery
    C heating
    D packing

20. The word distributed means:
    A packed
    B sterilised
    C delivered
    D refrigerated

SUB-TEST III

From the list of words given below (A to J), choose one which best fits into the blanks, and indicate the choice on the answer sheet.

REPRODUCTION OF THE GOLDFISH

The female goldfish lays her eggs in the early spring when the water becomes warmer. ___21___ she lays her eggs in the water, the male swims close to her and pours his sperm over them. The eggs are ___22___ fertilised in the water. They are sticky and cling to water-plants ___23___ they are hatched.

___24___ it is not cold, the eggs are hatched within five to seven days. ___25___ the tiny fish hatches out, a small yolk-sac is still attached underneath it.

(From General Science for Today 3)

A if
B before
C because
D then
E thus
F when
G but
H while
I since
J until

SUB-TEST IV

Study the CONTENTS below:

CONTENTS

(From The Jolly Reading Series: Plays and Tales)

SUB-TEST IV

On the Answer Sheet, indicate on which page you would read about:

26. a form of fighting without weapons

27. motor-racing

28. a careful little girl

29. a plant that brings luck

30. a ship that sank

31. a house that burned down

32. a famous story-writer

33. mending small mistakes before they become big ones

34. a man who sold his soul to Satan

35. a famous composer of music

SUB-TEST V

In one of the Readers is an interesting story about the Eiffel Tower. Read the following statements about it and guess whether they are True (T) or False (F). Indicate your answer on the Answer Sheet.

36. The Eiffel Tower was built by a French engineer called Monsieur Eiffel.

37. It is in Johannesburg.

38. It is only three metres high.

39. It was built only ten years ago.

40. Many people did not want the tower built.

41. There were no problems in building the tower.

42. The tower cost one million rands to build.

43. The government refused to give any money for the building of the tower.

44. When the tower was completed, it was the tallest building in the world.

45. People from all parts of the world visit the Eiffel Tower.

(Based on The Eiffel Tower in The Jolly Reading Series: Plays and Tales)

SUB-TEST VI

On the Answer Sheet is a paragraph consisting of five sentences from which all punctuation marks have been removed. Insert, on the Answer Sheet, the capital letters, commas and full stops.

SUB-TEST VII

In each of the paragraphs below there is a sentence which does not fit. Indicate this sentence on the Answer Sheet.

51 [1]In many countries animals are still used as a means of transport. [2]Some people still carry their own loads. [3]In India, for example, elephants are used, while in Lesotho donkeys and pack-horses are still used today.

52 [4]The invention of the wheel led to great developments in the field of transport. [5]What would our modern society do without the wheel? [6]We are totally dependent on the wheel. [7]I ride to school on my bicycle.

53 [8]The Americans did not invent the wheel. [9]No one knows with certainty how it was invented. [10]The use of tree-trunks as rollers to move heavy objects certainly contributed to its invention. [11]What we do know is that wheels have been in existence for a very long time.

54 [12]The invention of the wheel led to the invention of the cart. [13]At first it was drawn by people, but later draught animals were used. [14]People became very lazy now they did not have to carry or drag their own loads. [15]The earliest wheels were of solid material, such as stone, but with the invention of wheels with spokes, lighter carts and wagons could be drawn more easily.

55 [16]The development of the cart, wagon and coach led to the improvement of roads. [17]All the roads in the Eastern Cape are tarred. [18]To bear the load roads had to be hard and durable.

(Adapted from Primary History 3)

SUB-TEST VIII

Read the following conversation:

THE FOX AND THE CAT

[1]One evening a hungry fox visited a farm and met a cat.

Fox: [2]You are not such a wonderful meal for someone as hungry as I. [3]Just look at you! [4]I can count your ribs in the dark.

Cat: [5]Oh, please, Sir, do not eat me up. [6]Wouldn't you rather have a big fat cheese?

Fox: (His mouth watering) [7]Yes, but then you should hurry up. [8]Show me immediately.

[9]The cat took him to a deep well with two buckets tied to the ends of a rope on a reel.

Cat: [10]Look over the side, and you will see a big, yellow cheese. [11](It was the moon shining in the water!) [12]You go down like this. [13](The cat jumped into the bucket and dropped to the water. [14]When the bucket hit the water, the cat hung onto the rope.)

Fox: (Excitedly) [15]Bring the cheese up immediately. Quick!

Cat: [16]I can't. [17]It's too heavy. [18]You'll have to come and get it yourself.

[19]The fox jumped into the other bucket. [20]As he went down, the cat was drawn up, since the fox was heavier. [21]The bucketsplashed into the water, and the fox drowned.

Cat: [22]What do you think I am? A monkey?

(Translated from Afrikaans My Taal 3)

SUB-TEST VIII

On the Answer Sheet, indicate the function of each of the following sentences:

56. In sentence 2, the fox is _____ the cat.
   A pleased with
   B scolding
   C disappointed with
   D teasing

57. In sentence 6, the cat _____.
   A asks a question
   B gives a better choice
   C is being generous
   D knows that foxes like cheese

58. In sentence 15, the fox is _____.
   A angry
   B happy
   C disappointed
   D impatient

59. In sentence 17, the cat is _____.
   A pretending
   B complaining
   C asking for help
   D scared

60. In sentence 22, the cat is _____.
   A irritated
   B happy
   C impatient
   D asking a question

APPENDIX XVIII HIERARCHICAL FREQUENCY DISTRIBUTION/ E-TEST

Testee	Std	Score	
1. Conrad	4	50	
2. Shamela	5	48	
3. Carmen	5	45	
3. Liesl	5	45	
5. Vanessa	5	44	
6. Cynthia	4	43	
6. Eugene J.	5	43	
8. Angela	4	42	
8. Gerard	4	42	
10. Fabian	5	40	
11. Heidi	5	38	$\Sigma N = 1262$
12. Nazlie	5	36	
13. Asraf A	5	35	$m = 25,24$
14. Ulrica	5	34	
15. Marius	4	33	
16. Ashraf W	3	28	
16. Errol	3	28	
18. Bassidine	2	27	
18. David	3	27	
20. Charmaine	4	26	
20. Gillian	4	26	
20. Lyndon	2	26	
20. Madelein	2	26	
20. Penelope	3	26	
25 Beryl	2	25	
25. Jessica	2	25	
27. Donovan M	3	24	
27. Marilyn	2	24	
29. Gustin	4	23	
30 Sihaam	4	22	
31. Benito	2	21	
31 Lettie	3	21	
33 Ramleigh	4	19	
34 Carmen	3	18	
35. Carol	2	17	
35. Gaynor	3	17	
35. Oriele	2	17	
38. Phillistene	3	16	
39. Crystal	3	14	
40. Eugene B	1	12	
41. Rodney	1	11	
41. Yassiem	1	11	
43. Bernadette	1	10	
43. Jill	1	10	
45. Lucresha	1	9	
45. Rochelle	1	9	
47. Nicolette	1	8	
48. Donovan	1	7	
48. Janine	1	7	
50. Harlon	2	6	

APPENDIX XIXE: STANDARD DEVIATION AND RELIABILITY /E -TEST

Score	Mean	d	d^2
50	25,24	24,76	613,06
48	"	22,76	518,02
45	"	19,76	390,46
45	"	19,76	390,46
44	"	18,76	351,94
43	"	17,76	315,42
43	"	17,76	315,42
42	"	16,76	280,90
42	"	16,76	280,90
40	"	14,76	217,86
38	"	12,76	162,82
36	"	10,76	115,78
35	"	9,76	95,26
34	"	8,76	76,74
33	"	7,76	60,22
28	"	2,76	7,62
28	"	2,76	7,62
27	"	1,76	3,10
27	"	1,76	3,10
26	"	0,76	0,58
26	"	0,76	0,58
26	"	0,76	0,58
26	"	0,76	0,58
26	"	0,76	0,58
25	"	-0,24	0,06
25	"	-0,24	0,06
24	"	-1,24	1,54
24	"	-1,24	1,54
23	"	-2,24	5,02
22	"	-3,24	10,50
21	"	-4,24	17,98
21	"	-4,24	17,98
19	"	-6,24	38,94
18	"	-7,24	52,42
17	"	-8,24	67,90
17	"	-8,24	67,90
17	"	-8,24	67,90
16	"	-9,24	85,38
14	"	-11,24	126,34
12	"	-13,24	175,30
11	"	-14,24	202,78
11	"	-14,24	202,78
10	"	-15,24	234,70
10	"	-15,24	234,70
9	"	-16,24	263,74
9	"	-16,24	263,74
8	"	-17,24	297,22
7	"	-18,24	332,70
7	"	-18,24	332,70
6	"	-19,24	370,18

$$s.d. = \frac{7681}{50}$$

$$= 153,6$$

$$= 12,39$$

$$r_{11} = \frac{50}{50-1}\left(1 - \frac{25,24\,(50-25,24)}{50 \times 153,6}\right)$$

$$= 1,02\left(1 - \frac{25,24 \times 24,74}{7680}\right)$$

$$= 1,02\left(1 - \frac{624,44}{7680}\right)$$

$$= 1,02\,(1 - 0,08)$$

$$= 1,02 \times 0,92$$

$$= 0,94$$

APPENDIX XX. E: ITEM DIFFICULTY AND DISCRIMINATION / E-TEST

ITEM	U	L	U+L	F.V.	U-L	D
1	14	6	20	0,71	8	0,57
2	14	2	16	0,57	12	0,86
3	10	2	12	0,43	8	0,57
4	12	0	12	0,43	12	0,86
5	12	0	12	0,43	12	0,86
6	14	0	14	0,50	14	1,00
7	12	0	12	0,43	12	0,86
8	14	4	18	0,64	10	0,71
9	14	0	14	0,50	14	1,00
10	9	0	9	0,32	9	0,64
11	13	5	18	0,64	8	0,57
12	13	9	22	0,79	4	0,29
13	12	1	13	0,46	11	0,79
14	7	1	8	0,29	6	0,43
15	14	3	17	0,61	11	0,79
16	7	4	11	0,39	3	0,21
17	13	2	15	0,54	11	0,79
18	1	2	3	0,11	-1	0,07
19	14	4	18	0,64	10	0,71
20	2	4	6	0,21	-2	0,14
21	0	0	0	0	0	0
22	13	0	13	0,46	13	0,93
23	8	0	8	0,29	8	0,57
24	7	1	8	0,29	6	0,43
25	6	1	7	0,25	5	0,36
26	13	0	13	0,46	13	0,93
27	10	0	10	0,36	10	0,71
28	12	1	13	0,46	11	0,79
29	9	0	9	0,32	9	0,64
30	11	0	11	0,39	11	0,79
31	9	1	10	0,36	8	0,57
32	7	1	8	0,29	6	0,43

ITEM	U	L	U+ L	F.V.	U-L	D
-33	8	0	8	0,29	8	0,57
34	10	0	10	0,36	10	0,71
35	7	0	7	0,25	7	0,50
36	13	8	21	0,75	5	0,36
37	14	10	24	0,85	4	0,29
38	13	4	17	0,61	9	0,64
39	11	5	16	0,57	6	0,43
40	10	3	13	0,46	7	0,50
41	12	3	15		9	0,64
42	6	5	11	0,39	1	0,07
43	8	5	13	0,46	3	0,21
44	11	4	15	0,54	7	0,50
45	11	6	17	0,61	5	0,36
46	14	12	26	0,93	2	0,14
47	7	0	7	0,25	7	0,50
48	12	0	12	0,43	12	0,86
49	9	0	9	0,32	9	0,64
50	9	1	8	0,29	8	0,57
51	12	5	17	0,61	7	0,50
52	12	4	16	0,57	8	0,57
53	4	1	5	0,18	3	0,21
54	8	1	9	0,32	7	0,50
55	9	6	15	0,54	3	0,21
56	3	3	6	0,21	0	0
57	4	3	7	0,25	1	0,07
58	12	2	14	0,50	10	0,71
59	7	2	9	0,32	5	0,36
60	2	1	3	0,11	1	0,07

APPENDIX XXI: QUESTIONNAIRE

The information requested is strictly confidential; you are not required to give your name. Any solution to the reading 'problem' lies in continuing research by teachers, academics, curriculum developers and planners.

Your co-operation is appreciated. J. H. PITT

A. PERSONAL

FILL IN THE INFORMATION IN THE BLOCKS PROVIDED:

1. SEX: Male (M)/Female (F) ▱
2. Teaching Experience (No of years) ▱
   - 2.1 in Kindergarten ▱
   - 2.2 in Junior Primary School ▱
   - 2.3 in Senior Primary School ▱
   - 2.4 in Junior Secondary School ▱
   - 2.5 in Senior Secondary School ▱
3. Put X in the appropriate block -- IN ONE BLOCK ONLY
   - 3.1 ABC (phonics/spelling) method ▱
   - 3.2 Whole-word/Look-and-Say Method (Flash Card) ▱
   - 3.3 Linguistic Approach (Whole sentence Recognition) ▱
   - 3.4 Language Experience Method ▱
   - 3.5 Do not remember ▱
   - 3.6 Combination (Eclectic Approach) ▱

   If combination of methods, write down the letters representing the methods
4. Which method are you using? (See list under 3) ▱

   If 3.6 used/preferred, write combination

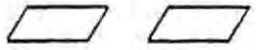
B. THE READING PROCESS

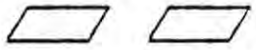
PUT X IN EITHER THE TRUE OR THE FLASE BOX:

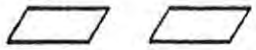
1. Teachers/...

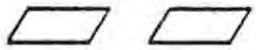
	TRUE	FALSE
1. Teachers do not need to understand the reading process in order to teach reading	▱	▱
2. Learning to read means learning to associate written words with spoken words	▱	▱
3. In beginning reading it is more important for a child to pronounce words correctly than for the child to get the meaning of what is said	▱	▱
4. Since learners need immediate feedback, a child should be corrected whenever he or she makes an error in reading aloud	▱	▱
5. Â child should learn to read one sentence ât a time, without looking ahead or backward	▱	▱
6. Children need to speak standard English (with perfect pronunciation) before they can learn to read	▱	▱
7. In helping children to learn to read, one should focus first on spelling-to-sound correspondences, then on words, last on phrases and clauses	▱	▱
8. Children should be encouraged to sound out unfamiliar words instead of guessing at their meaning	▱	▱
9. Learning to read is essentially a matter of mastering certain skills (mechanical); meaning will follow automatically after this	▱	▱
10. Children must read aloud with correct pronunciation in order to understand what they are reading	▱	▱
11. Children will not be able to attack new words unless they have been taught phonics rules	▱	▱
12. Reading is an active process in which the reader reconstructs the written text (story)	▱	▱
13. Unfamiliar words should be discussed before the reading starts	▱	▱
14. The meaning of what is written is essential; the words are not really important -- they merely assist in the reader's understanding	▱	▱

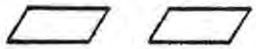
15. It is/...

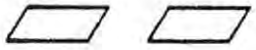
15. It is important for the child to be taught to "read" information that is not stated explicitly in the text 

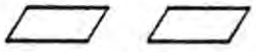
16. When reading for specific information, the reader should be encourage to read every word in the sentence, on the page, in the chapter, in the text 

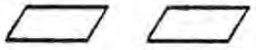
17. Children should not be encouraged to predict what they have not yet read since they will not concentrate on what they are reading at any particular time 

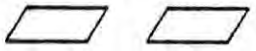
18. Children should be taught to be objective, that is, they must not allow their own experiences to interfere with the meaning of the text (story) 

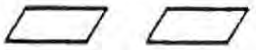
19. When children are confronted with an unfamiliar word, they should be encouraged to guess at its meaning instead of consulting the dictionary 

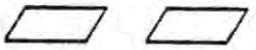
20. Children should be encouraged to guess at the contents of the text (story/ book) even before they have read it 

21. Reading aloud is not really reading since it does not contribute towards understanding of the text 

22. If required to read aloud, children should be allowed to read through the text silently first 

23. Children should be encouraged to read silently through the text within a specified time limit 

24. Children should be encouraged to make summaries of longer texts they have read 

25. Children should be encouraged to make diagrammatical representations of facts given in a text 

APPENDIX XXII: EXTRACT FROM A PRESCRIBED STD 5 SCIENCE TEXT BOOK

HOW DOES HEAT REACH US FROM THE SUN?

We all know that:

1. (i) we get heat from the sun, and
2. (ii) there is just empty space above the earth's atmosphere.
3. Thus the heat from the sun cannot reach us by conduction or convection, and so there must be some way in which the heat can be transmitted.
4. -- This third way in which heat can be transmitted is called radiation.
5. -- Neither a solid nor a liquid nor a gas is necessary when heat travels by radiation.
6. -- We say that the sun or a hot body radiates heat.
7. -- Even a cool object will radiate heat.
8. -- We also say that the sun or a hot body emits (gives off) radiant heat.
9. -- Radiant heat can pass through a substance such as air without heating it.

SUGGESTED RECONSTRUCTION

We get heat from the sun. The sun, like all objects (even cool ones), emits or radiates heat. To reach the earth, the heat must be transmitted. Because there is just empty space above the earth's atmosphere, this cannot be done through either conduction or convection, so there must be another way in which the heat is transmitted. It is called radiation. It does not require a solid nor a liquid nor a gas for heat to travel to the earth. Radiant heat can pass through a substance without heating it.

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Bever/....

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