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*DEVELOPING THE READING COMPREHENSION SKILLS OF
ENGLISH SECOND LANGUAGE PRIMARY SCHOOL TEACHER TRAINEES
AT AN
AFRIKAANS-MEDIUM COLLEGE OF EDUCATION.*

Colin W. Souter

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Colin W. Souter

A dissertation submitted to the Faculty of Education
of the University of Cape Town
in fulfilment of the requirements
for the Degree of Master of Education.
Cape Town, 1989.

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SYNOPSIS

There is evidence that many primary school teachers of English Second Language (EL2) are inadequately equipped to teach reading comprehension skills. They test their pupils on literal, at the expense of inferential, reading skills. This investigation therefore sought to test the literal and inferential reading comprehension skills of a group of Afrikaans-speaking EL2 teacher trainees and to design a reading comprehension programme which would improve their thinking skills over a period of nine months. The students were also instructed in a programmed reading course (the SRA Reading Laboratory) to determine its efficacy in improving their thinking skills.

A further objective was to establish whether a programmed reading course or the author's cognitive reading development programme benefitted high-status (proficient in English) more than low-status (less proficient) EL2 students and what effects the two different programmes would exert on their reading comprehension skills a year after formal instruction in reading comprehension ceased.

It was found that specific sequences of the two different instructional programmes were associated with significant changes in the students' reading comprehension scores. It was also found that, while high-status students benefitted sooner from the author's cognitive reading comprehension programme, that approach was also ultimately beneficial for low-status students. It is suggested that cognitive reading development programmes be implemented at primary, secondary and tertiary institutions where language skills and levels of meaningful reading need to be raised.

Declaration

I declare that this dissertation is my own unaided work. It is being submitted for the degree of Master of Education at the University of Cape Town. It has not been submitted before for any degree or examination at any other University.

Colin W Souter

12th day of April 1989.

Dedication

To my mother

Isabella Mathilda Hannah Kiley

14 April 1902 - 20 December 1965

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CHAPTER 1

THE ORIGIN AND BACKGROUND OF THE PROBLEM

1.1 INTRODUCTION

In recent years Kitching (1984) expressed concern about the communicative competence, in English, of Afrikaans-speaking matriculants selected for primary school teacher training. His study showed that the communicative competence of the average first-year, English Second Language (EL2) college student was normatively equivalent to that of the average standard five (year seven), English-speaking pupil in the Cape Province.

Schoeman (1984) examined the EL2 end-of-year reading comprehension tests set for Standards 3, 4 and 5 by teachers of EL2. He found that in both urban and rural primary schools 95% of the questions set were literal in nature and only 5% tapped thinking (inferential) skills - a disproportionate emphasis which is some cause for concern. Many studies have emphasized the crucial role of inference in meaningful reading (McIntosh, 1985; Carr, 1983; Wilson and Hammill, 1982; Escoe, 1984; Hansen, 1981; Hansen and Pearson, 1982; Paris and Lindauer, 1975). They also stress that inferential reading skills can be taught.

Sixty-eight per cent of teachers in Schoeman's (1984) study state that they were not adequately taught reading comprehension at college or university. This fact is clearly reflected in the Standards 3, 4 and 5 test papers mentioned above. Too much rote learning of literal meanings is taking place in our primary schools. Instructing college EL2 students in inference is obviously essential not only because it better equips them to teach reading skills but also because a cognitive reading comprehension programme should provide the EL2 student both with the key to a rich

store of useful information available in English and with a defence against harmful disinformation so prevalent in the mass media. The quality of our educational system depends on critical thinking skills. Besides, implementing the communicative approach to EL2 teaching is severely hampered by teachers who operate with a restricted code of literal reading skills in English. The present study sought to determine which reading development programme might develop the critical thinking skills of EL2 college students.

Thus it was decided to compare the SRA reading laboratories with the present writer's own cognitive (inferential) skills development programme. (See Appendix XIII). The aim was to establish which reading scheme would ensure optimal development of the cognitive reading comprehension skills of both proficient and less proficient EL2 students. There was a clear need for a programme which emphasized both subordinate (literal) and superordinate (inferential) reading skills. A cognitive strategy was selected because it was also in keeping with the communicative approach to language learning of the Cape Education Department. A first step in developing inferential reading skills was to instruct the students in the generation of inferential questions on texts which EL2 teacher trainees were likely either to use in the classroom or to consult during their professional careers.

The main concern of the present study was to seek ways of developing the thinking skills of EL2 primary school teacher trainees by means of a cognitive reading comprehension programme. Hopefully they would transfer their skills to the classroom and counter the present tendency of EL2 teachers to emphasize merely rote-learned literal meanings at the expense of thinking skills.

1.2 STATEMENT OF THE PROBLEM

The language needs of the EL2 reader differ from those of the EL1 student: the EL2 student's reading comprehension subsumes the acquisition and development of both vocabulary and English linguistic structures; the EL1 speaker already has these skills and merely requires reading programmes which enrich his command of his native tongue.

The central problem was the selection of the most effective approach to develop interactive cognitive reading skills for EL2 students. It was therefore decided to ascertain whether the SRA reading laboratories or the author's cognitive reading comprehension strategy would best improve the inferential comprehension skills in English of both proficient (high-status) and less proficient (low-status) first-year Afrikaans-speaking college students at an Afrikaans-medium teachers' college. The findings might be of use to any institution where English is taught as a second language. The present study therefore sought to determine the optimal sequence and duration of a programmed reading scheme (the SRA) and a cognitive reading comprehension strategy. If the SRA did not sufficiently promote thinking skills, an alternative cognitive strategy would be proposed.

1.3 OBJECTIVES OF THE INVESTIGATION

The objectives of this study were therefore:

- (a) to establish the proficiency in English of the 1987 first-year students at a chosen rural teachers' college and to classify them into those above, and those below, an acceptable standard of proficiency.
- (b) to test those students' literal and inferential reading comprehension skills before, during and after instruction in the author's "Cognitive Reading Comprehension Training Programme" to determine the

short-term effects of instruction; and to establish the long-term effects a year after training ceased.

- (c) to design the cognitive reading comprehension programme mentioned in (b) above which would promote inferential skills and serve as a viable alternative to the SRA. Such a programme should emphasize independent, critical thinking skills for the second language learner.

1.4 THE SAMPLE

The sample studied consisted of 52 first-year EL2 college of education students racially classified as belonging to the White S.A. population. The college is a rural institution with Afrikaans as the medium of instruction. All the students had been selected for teacher training by the Cape Education Department. They had passed the Senior Certificate Examination which requires only a minimum of $33\frac{1}{3}$ % for English Second Language on the Higher Grade.

The student sample constituted the 1987 Afrikaans-speaking first-year intake for the Primary School Diploma in Education. Only five students of the year's intake were classified as English-speaking and consequently excluded from the experiment. There were 47 females and only 5 males ranging in age from 17 to 19 years. Eighteen students had enrolled for the Senior Primary School Course designed for teachers of standards 2, 3, 4 and 5 pupils, and 34 students for the Junior Primary School Course for teachers of sub-standards A and B and standard-one pupils.

Since the Cape Education Department itself selects prospective primary school teacher trainees for its colleges, the sample was regarded as representative of White, Afrikaans-speaking, first-year college students in the Cape Province.

1.5 THE IMPORTANCE OF THE PROBLEM

The problem is pertinent because there is ample evidence that EL2 reading in the primary school is often superficial and limited to the literal content of the texts studied. Matriculation students also sometimes pass the EL2 examination on the strength of prepared, memorized answers to questions on the prescribed literature. Such strategies can never lead to the development of critical, thinking skills which are fundamental to the whole educative process. Instruction in thinking skills is vital for the intellectual development of both teacher and taught. Our entire education system is dependent on the learners' competence in reading and no-one can advance professionally nowadays unless s/he is proficient in critically interpreting and evaluating texts of all kinds.

At present those teachers who are themselves deficient in English language skills are perpetuating a low level of English usage in our school system. It is imperative to break the vicious circle which such conditions create. It is also true that the majority of the South African population regard English as a life-line to intellectual and economic survival in the world at large. They cannot hope to improve the quality of their lives unless they have proper access to an internationally recognized language like English. They would also benefit from instruction in cognitive reading comprehension strategies.

1.6 CLARIFICATION OF TERMS

The following definitions apply to the present study:

1.6.1 Taxonomy of Reading Comprehension Skills

Vertical arrangement of lower-order (e.g. literal) and higher order (e.g. judgmental) reading skills necessary for understanding a prose text.

1.6.2 Literal reading comprehension skills

Lexical meanings, synonymous expressions, antonyms, explanations, meanings of words in their context (including ambiguity). The location of verbatim quotations which answer a given question. Generally speaking, reading "on the line".

1.6.3 Inferential reading comprehension skills

Drawing conclusions from a text, comparing and contrasting information; interpreting the implication of metaphorical and other figurative language; eliciting the main ideas; either judging the adequacy of these ideas or making a value judgment of the quality of the text; generally speaking, reading "between the lines".

1.6.4 The SRA

Abbreviation for a commercially available programmed reading comprehension course: Parker, Don H, Science Research Associates International Reading Laboratory, Don Mills, Ontario, Canada, 1969.

Reading Laboratories Number IIC, IIIb, and IVa were used in this experiment.

1.6.5 High-status and low-status EL2 learners

Operationally defined as those college teacher trainees who obtained respectively 61-80% and 34-59% in Kitching's (1984) standardised A Test of Proficiency in English.

The 34% represents the actual lowest and the 80% the highest score obtained in the proficiency test by the sample subjects in the present study. High-status are also termed "proficient" and low-status "less proficient" students in EL2.

1.6.6 Communicative competence versus communicative performance

(1) Competence: "The speaker-learner's knowledge of his language" which enables him, amongst other language skills, to distinguish between grammatical and non-grammatical sentences (Piattelli-Palmarini, 1980: 15).

(2) Performance: "The actual use of language in concrete situations" (op. cit.)

Competence involves unconscious knowledge of the rules and structure of one's native language while performance involves conscious expression or understanding of such rules and structures. Performance is subject to the constraints of memory, motivation, concentration, error and other psychological variables. Competence, by contrast, is an idealized system of linguistic knowledge.

1.6.7 A reading comprehension strategy

The SRA and cognitive reading comprehension programmes are defined as strategies and not methods. In this study a strategy implies a particular technique for ensuring the mastery of the subject matter; a method is confined to a

lecture, discussion, small-group work and other means of interaction between learner and learning material. In the literature such distinctions are not always made and the terms are sometimes used interchangeably.

1.6.8 Readability

The degree to which a text is judged to be easy or difficult to read as measured by various formulae. Readability indices (scores) are, however, only approximations of the difficulty of a text.

Fry's readability graph (1977) takes account of the number of sentences as well as the number of syllables per 100 words in a text. The Flesch formula (cited in Harrison, 1980) involves counting the number of syllables per 100 words and the number of words per sentence.

1.6.9 Language Proficiency Test

A test which measures usage, grammar, spelling and punctuation by means of discrete-point multiple choice items. It includes a test of written composition and a cloze test of reading comprehension (Kitching, 1984).

1.6.10 Cloze Test

"A procedure which involves deleting or omitting words in a text on a systematic basis. The reader is required to insert appropriate words with the help of the context. Cloze procedure can be used to measure reading attainment and the level of difficulty of any given book". (Bullock , 1975:586).

1.6.11 Discrete-point versus integrative test

A discrete-point test samples isolated grammar, pronunciation, idiom, vocabulary, spelling, punctuation and other aspects of language. A discrete-point test of pronunciation would require the testee to underline the silent letters in a group of words like "psalm", "gnaw" and "knee". An integrative test is creative because it requires the testee to demonstrate his communicative performance in the language by putting it to use in, for example, literary essays, letters, book reviews, interviews, etc.

1.7 THE HYPOTHESES

In this study it is hypothesized that different instructional strategies for reading comprehension will significantly improve the inferential and literal reading skills of both high-status and low-status EL2 students.

It is also hypothesized that initial differences between the literal and inferential reading skills of high-status and low-status EL2 students will be maintained in the long term (i.e. a year after formal training ceases).

The hypotheses are operationally defined in full detail in Chapter 3.

1.8 PROCEDURE

In order to test the hypotheses mentioned in 1.7, the investigation was conducted as follows:

- A taxonomy of reading comprehension subskills was selected on which to base an author-constructed cognitive strategy of reading skills development.

- Three measuring instruments to test reading comprehension were designed. One of them was used with a small group of second-year EL2 students as a pilot test.

Tests of reading comprehension currently available were not used in this experiment as they do not involve the generation of questions by the testee. Self-generated questions were considered necessary for both the training and subsequent testing of EL2 teacher trainees. Part of a teacher's professional competence is his/her ability to formulate, as well as answer, superordinate questions.

The sequence of procedures was as follows:-

- Kitching's (1984) A Test of Proficiency in English was administered to the sample population.
- The sample population was then trained in reading comprehension subskills.
- The three parallel tests of literal and inferential reading comprehension were administered to the sample.
- Scores were obtained for use of language on the one hand and reading comprehension on the other.
- The data obtained were subjected to appropriate statistical analysis; conclusions were drawn and recommendations were made.

1.9 ORGANIZATION OF THE REMAINDER OF THE THESIS

Chapter 2 examines theories of reading comprehension; contains a review of current research on inferential reading comprehension skills; offers comments on programmed learning and the SRA; and proposes an alternative cognitive reading comprehension strategy.

Chapter 3 deals with setting, population samples, research method, experimental design, measures employed, course materials, procedure employed and the format of the statistical analysis.

Chapter 4 presents the results in graphical form and confirms or refutes the hypotheses.

Chapter 5 deals with the findings, limitations of the measures, the course materials, and the experimental design itself. It links the present results with those of the other investigations reviewed and it explores the implications of the findings.

Chapter 6 summarises the findings, offers conclusions and makes recommendations for EL2 instruction and for further research.

The study ends with References and Appendices.

1.10 SUMMARY OF CHAPTER 1

1. An overemphasis on literal reading comprehension in the primary school is not conducive to the broader aims of education such as the development of critical thinking skills.
2. Neither colleges of education nor universities provide adequate instruction in reading comprehension.
3. Instruction in cognitive reading comprehension skills should promote independent thinking and critical judgment.
4. Independent thinking and critical judgment are essential for the implementation of the communicative approach to EL2 teaching.

5. To determine how best to promote critical thinking skills through reading comprehension, an experiment with EL2 college students was conducted.
6. Literal and inferential reading comprehension subskills and terms like competence, performance and readability were defined.
7. It was hypothesized that the different reading comprehension instructional strategies employed in the study promoted different reading comprehension skills.
8. The procedures used in the presentation of two instructional treatments and the treatment of the data were outlined.
9. The organization of the remainder of the thesis was summarised.

CHAPTER 2

REVIEW OF RELATED LITERATURE

2.1. THEORIES OF HUMAN LEARNING

Since models of reading comprehension must be seen against the background of general learning theory and the relationship between language and thought, the next section briefly examines relevant theorists whose views lend support to a cognitive view of learning.

2.1.1 GAGNÉ

Gagné's model (1965: 33-69) for efficient learning consists of eight hierarchical types of learning ranging from the simple to the complex. He regards the simpler as prerequisites for the more complex types; in other words, the more complex or higher-order skills are not normally mastered unless they have been preceded by the fundamental ones. He concedes, however, that the high-progress learner may take intellectual leaps and, apparently, omit lower-order types of learning:

"In a sense, he is able to acquire both the subordinate and the superordinate skill in one intellectual jump".
(op. cit.: 241)

For the present investigation, Gagné's findings were taken as implying that behaviourist-based programmed learning (like the SRA) may be more suitable for low-progress learners while a cognitive learning strategy (such as that devised by the author) might better suit high-progress learners.

2.1.2 CHOMSKY

Chomsky's distinction between competence and performance, as well as deep versus surface structure, (in Piattelli-Palmarini, 1980), also supports a cognitive view of learning: performance reflects the surface while competence reflects the deep structure of language. This distinction enables the native speaker to recognize and interpret ambiguity and to derive inherent meaning from surface structure. This is another reason for the present study's contention that an overemphasis on literal surface meanings at the expense of inferential "deep" meanings is inhibiting genuine reading comprehension in the primary school.

2.1.3 LURIA

Luria's (1981) notion of "text" and "subtext" or outer meaning and inner sense can be seen as analogous to Chomsky's deep and surface structure. The comprehender "must get away from the direct system of meanings and move to an analysis of inner sense" (op. cit.: 193). If this is so, reading comprehension is more a matter of competence and less of performance. Such a view supports the contention that overemphasis on literal meanings in reading comprehension is misplaced and that the essence of the text must be extracted by deduction, inference and reasoning.

2.1.4 VYGOTSKY

Vygotsky's views on the child's cognitive development lend strong support to a cognitive linguistic inter-active model of reading comprehension. To Vygotsky (1962: 16) the child's audible egocentric speech is primarily an instrument for problem solving, i.e. language is employed as an instrument of thought. Gradually, as the child matures, audible egocentric speech is transformed into silent inner speech.

However, thought can be independent of speech: "Inner speech is speech almost without words" (op. cit.: 145). The area where inner speech and thought overlap or coincide, Vygotsky terms "verbal thought" (1962: 47). Thought and speech obviously interact but may initially develop independently: they have different roots but grow together during the process of maturation.

The translation of inner speech into verbalization does not consist merely of vocalizing silent speech:

"It is a complex, dynamic process involving the transformation of the predicative, idiomatic structure of inner speech into syntactically articulated speech intelligible to others" (op. cit.: 148).

Reading involves the reverse process: transforming the surface syntactic structures of the written code into the deep structures which represent the thoughts of the writer.

Since Vygotsky regards learning "as a profoundly social process", he stresses the importance of dialogue "in mediated cognitive growth" (op. cit.: 131).

Vygotsky's view, stressing as it does the importance of dialogue between teacher and taught, would support the use of an inter-active cognitive strategy for the development of reading comprehension such as that employed in this study. Programmed learning, by contrast, minimizes dialogue between teacher and taught.

The cognitive strategy of self-generated inferential questions and answers requires the EL2 student to interact with the text and to think in English, the target language.

Reading could be regarded as a social act, a "conversation" between reader and author during which the communication

takes place at the level of deep structure rather than at the literal surface level of mere printed symbols on a page.

The next section examines models of reading comprehension which emanate from a cognitive view of learning.

2.2. MODELS OF READING COMPREHENSION

Raubenheimer (1983: 21-38) distinguishes five models of reading comprehension: behaviourist, cognitive, cognitive-affective, information processing, and linguistic.

Only the cognitive and linguistic models are discussed here since they are directly relevant to this study.

2.2.1 THE COGNITIVE MODEL

Wittrock (in Pirozzolo, 1981: 234) describes reading as a generative process in which the reader creates meaning by attending to the deep rather than the surface structure of a text. Spiro (1980: 569-70) regards reading as "intelligent guessing" during which the reader generates hypotheses. Goodman, too, (1970b: 15) characterizes reading as a "psycholinguistic guessing game" in which the reader makes minimal use of graphic, semantic and syntactic clues in order to reconstruct the writer's meaning: ".... reading, like listening, is a sampling, predicting, guessing process" (Goodman, 1970: 15). These writers' views all stress that reading involves the continual generation of hypotheses by the reader, and the employment of thinking and reasoning skills to derive implied meanings.

The emphasis of the cognitive model on deep structure and hypothesis generation suggests that instructing students in the generation of inferential questions on a text would be an appropriate cognitive strategy. If inference (i.e.

thinking) is crucial to reading comprehension, students should be trained in that skill.

Reading is also thinking. Thinking requires the use of language. A reading development programme must therefore promote the linguistic proficiency of the learner and provide instruction in cognitive reading strategies. Hence the need for a cognitive - linguistic approach to reading comprehension.

In addition, independent thinking and critical judgement during reading are essential if the broader aims of education are to be realized.

2.2.2 THE LINGUISTIC MODEL

Linguistic models stress the link between reading and linguistic competence. Luria (1981: 177-80) points out that the skilled reader's knowledge of the syntax and semantics of his language makes him less dependent on graphic information. Conversely, the disabled reader is inhibited from extracting meaning from a text by his inability to make use of lexical, phonological, syntactic, morphological and semantic clues in the text. Hence the need for a linguistic approach to the training of EL2 college students in reading comprehension.

Since reading is "an extremely complex language system with strong cognitive, affective and perceptual aspects" (Raubenheimer, 1983: 41), no single model incorporates all the variables relevant to the process of reading. Current models of reading comprehension apply to learning in general as much as to reading in particular: the modification of existing cognitive structures, stimulus-response mechanisms, world knowledge, hypothesis-testing, attitude, reduced redundancy, prediction, attention switching and many others apply to other learning tasks as well as to reading. It is

extremely difficult to isolate distinctive variables that apply specifically to reading comprehension. A well-balanced reading development programme must therefore stress the interaction between lexical, phonological, syntactic, morphological and semantic meanings on the one hand and cognitive learning strategies on the other. In the next section the author's interactive model of reading comprehension is proposed.

2.2.3 AN INTERACTIVE MODEL OF READING COMPREHENSION

The issues mentioned in the previous section influenced the design of the reading comprehension model developed by the author for promoting higher order reading skills for second language learners.

The author's view is that reading comprehension involves the interaction between linguistic competence and the cognitive and affective variables that affect learning in general.

Built into his model is explicit recognition of the inseparable link between language and cognition. His model therefore focuses on the special needs of EL2 students and involves instruction in the lexical, phonological, syntactic, morphological and semantic features of English as well as the development of cognitive reading comprehension strategies. Hence the author's selection of a cognitive-linguistic approach to EL2 reading instruction in this particular study.

Although the emphasis is on the interaction between cognition (in accordance with the views of Wittrock, Spiro and Goodman discussed in section 2.2.1 - The Cognitive Model), and language (as suggested by Vygotsky and Luria), other dimensions of learning also affect reading comprehension, e.g. sensori-motor, psycho-motor, perceptual, affective and socio-cultural variables (Pienaar, 1970;

Fourie, 1978; Raubenheimer, 1983). See Figure 1 below which illustrates the interaction between the major dimensions of learning that affect reading comprehension.

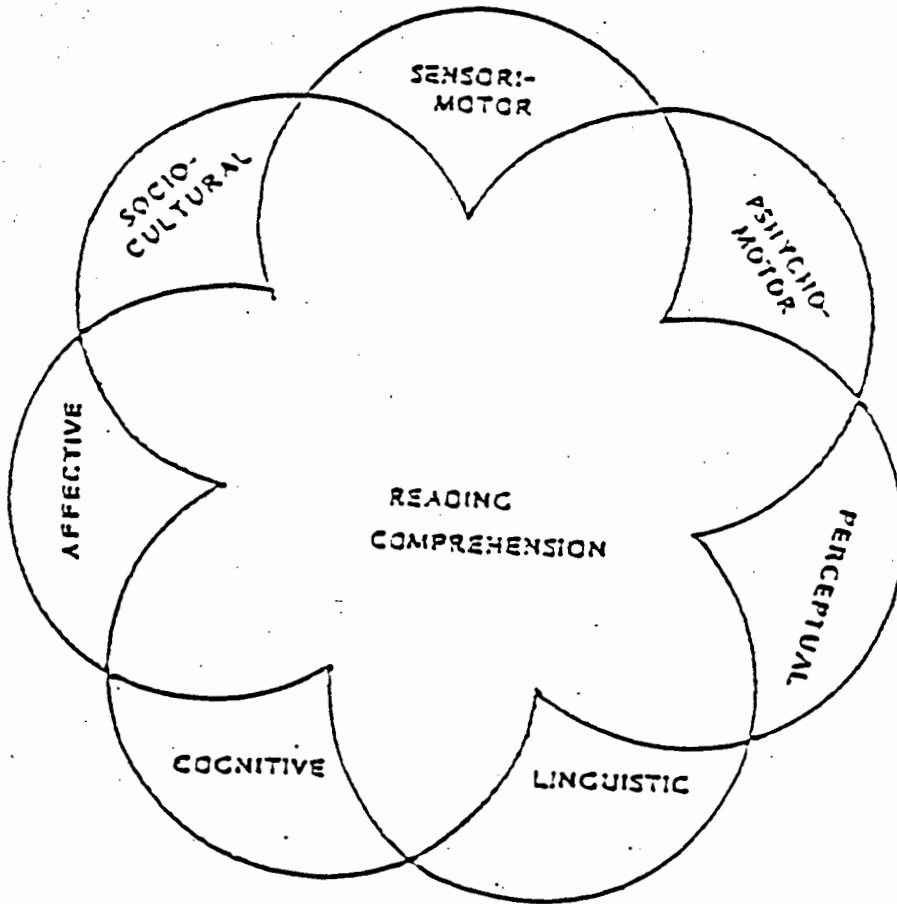


Figure 1

Major Dimensions Of Learning That Affect Reading Comprehension.

Luria (1981) stresses the fact that linguistic competence is an essential ingredient of comprehension. Linguistic competence may be regarded as a complex system of phonological, lexical, morphological, syntactic and semantic meanings (Harris, 1960; Elgin, 1979). This system is illustrated in Figure 2 below.

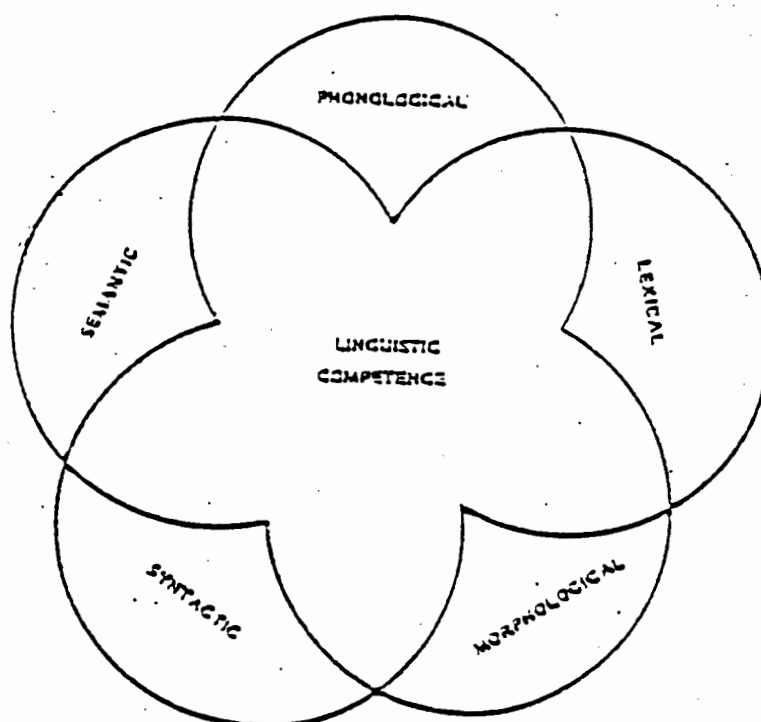


Figure 2

The Major Interactive Variables in Linguistic Competence.

In the author's view any developmental reading comprehension programme must take account of the twelve major interactive variables illustrated in Figures 1 and 2 above.

The author's cognitive reading comprehension programme (Appendix XIII) specifically provides for training in the linguistic structures of English in order to promote the L2 learner's linguistic competence which features so prominently in skilled reading. However, the instructor who employs the author's training programme must himself decide on the degree of emphasis that he wishes to place on each of the factors which facilitate the development of reading of comprehension at any particular stage of the learner-reader's cognitive development.

In the author's particular instructional programme he focused mainly on the EL2 learner's cognitive and linguistic skills.

2.3 RESEARCH ON READING COMPREHENSION IMPROVEMENT IN GENERAL

Research projects during the last decade have, amongst others, examined the use of advance organizers, chunking, the cloze procedure, intensive versus extensive reading, and training in inferential skills. However, Sanders (1980) casts doubt on the reliability of many of the investigators' conclusions: he found that, of 676 references to reading improvement programmes in the literature, only 66 studies had quantifiable research data. Of these, only 28 studies employed adequate research controls and maintained satisfactory validity.

A brief summary of readings cited by the author is tabulated as follows:-

2.3 THE IMPROVEMENT OF READING COMPREHENSION IN GENERAL

Strategy	Distinctive features of strategy	Trends or Experimental Results	Reference, Author, Date	Comments
1. Metacognition.	Skimming; scanning; note taking; summarizing; previewing; outlining; signal words; selective questioning; cloze procedure.	Metacognition should be taught directly through instruction and practice.	Burley (1985)	Burley reviews the literature on metacognition. Instruction in metacognitive strategies promotes reading comprehension.
Metacognition.	Stresses subject's awareness of reading comprehension tasks and strategy variables.	College students are more conscious and capable of monitoring their own mental processes.	Rinehart & Platt (1984:54)	Knowledge of one's cognitive processes aids reading comprehension.
2. Intensive versus extensive reading.	Detailed study of passages versus extensive reading.	University students of English as foreign language achieved better results through intensive reading.	Laufer-Dvorkin (1981:40)	Statistical evidence not available.
3. Chunking.	Special separation of sentences into small groups of meaningfully related words.	Subjects: 104 college students. No improvement in reading efficiency.	Carver (1968:30)	No statistical evidence available.
Chunking.	As above.	Chunking might improve reading comprehension of good and poor readers.	Brozo (1983:442)	No statistical evidence available.
4. Advance organizers.	Summary, synopsis of text to be studied: advance organizer is placed before, after, and before and after text.	Subjects: 160 college freshmen. Placing organizer <u>after</u> text resulted in greater comprehension.	Schnell (1973)	Control group was used; no statistical evidence available.

Strategy	Distinctive features of strategy	Trends or Experimental Results	Reference, Author; Date	Comments
Advance organizers.	Structured overviews plus prereading vocabulary instruction.	Subjects: college students; groups using overview in studying history and physical science texts showed significant improvement in comprehension scores.	Snouffer & Thistlethwaite (1979)	Experimental group scored higher than controls.
5. Cloze procedure.	Omission of nth word in a text.	Promotes discussion of process of reasoning which constitutes reading comprehension.	Smith (1969)	No statistical evidence available.
Cloze procedure.	As above.	Instruction in cloze procedure did not affect general reading ability of students in business course.	Phillips (1973:181)	Control group was used; Nelson-Denny post-test was applied.
6. Practice in writing in the expressive mode.	Instruction to promote cognitive growth through the transfer of the cognitive processes shared in the act of reading, writing and thinking.	Subjects: college freshmen in a remedial reading course. Knowledge gained from writing transfers positively to reading comprehension.	Collins (1981)	No statistical evidence available.
7. Cooperative learning versus individual learning.	Cooperative learning in pairs from expository texts; one partner summarizes the text while the other listens or provides feedback.	Recallers learned more than listeners; summary-recall and feedback strategy transferred positively from cooperative to individual learning.	Dansereau (1983)	No statistical evidence available.
8. Computer assisted individualized reading instruction (C.A.I.).	Modules designed to improve reading comprehension (e.g. finding main idea).	Subjects: USA university students; results described as "promising".	Thompson (1980)	No statistical evidence available.

2.3.1 IMPLICATIONS OF RESEARCH ON READING COMPREHENSION IMPROVEMENT IN GENERAL

The following conclusions may be drawn:

1. Any of a large number of treatments and interventions is likely to produce some (usually beneficial) result.
2. Lack of controls and statistical evidence weaken the investigators' conclusions.
3. More research is necessary to determine which reading comprehension strategy will produce optimal benefits for a particular learner at a particular stage in his/her cognitive development.

2.4 RESEARCH ON INFERENTIAL READING COMPREHENSION IN PARTICULAR

Some recent research on inferential reading comprehension is summarized below by the author:

Author, Date	Distinctive features of strategy	Results of Investigation	Comments
1. McIntosh (1985:755)	-	Drawing inferences is an integral part of reading comprehension; inferential skills can be developed.	-
2. Carr (1983:518)	-	Supports McIntosh's conclusions.	No statistical evidence available.
3. Kavale & Schreiner (1979)	Selection of key lexical items; comparison; classification; definition; generalization.	Poorer readers were less successful at applying the strategy when processing a text.	No statistical evidence available.

Author, Date	Distinctive features of strategy	Results of Investigation	Comments
4. Wilson & Hammill (1982:424)	Making inferences in paraphrasing a text.	A major difference in ninth grade students of differing reading ability lay in the number of inferences they made in the paraphrasing task.	No statistical evidence available.
5. Oakhill (1984:39)	Answering from memory both literal and inferential questions shortly after reading a story.	Less skilled 7-8 year old readers were poorer at answering inferential questions than skilled readers.	-
6. Holmes (1985:542)	A structured inferencing strategy was used; reading materials were graded from easy to more difficult.	24 disabled elementary school readers had problems answering inferential questions because they lacked successful problem- solving strategies.	-
7. Escoe (1984:226)	-	Traditional method of setting questions on a passage is ineffective. Intermediate grade students should receive direct instruction in inferential subskills.	-
8. McCormick & Hill (1984:219)	-	Supports view that disabled readers should be taught inferential skills.	-
9. Hansen (1981)	-	Average and slightly above-average second- grade pupils benefitted from instruction and practice on inferential reading comprehension.	No statistical evidence available.
10. Carr (1983:18)	Combined strategies of structured overview, cloze procedure and self-monitoring checklist to maintain inferential thinking.	Inferential comprehension skills of 6th-grade pupils increased; both immediately and delayed recall were measured.	No statistical evidence available.
11. Brimble (1986:84)	The strategy focussed on the difference between literal and inferential questions in the content subjects.	The strategy helped to improve students' responses to questions on a text.	No statistical evidence available.

Author, Date	Distinctive features of strategy	Results of Investigation	Comments
12. Allen (1985:603)	Pupils read (i) their own dictated stories (ii) peer dictated stories (iii) stories written by adults.	First-, second-, and third-grade pupils inferred better if they dictated the stories themselves and if they were more accurate word decoders.	-
13. Malicky & Schiebein (1981:335)	Texts at different instructional levels were used.	Both average and poor readers would infer if texts were at their respective instructional reading levels.	-
14. Johnson & Smith (1981:1216)	Drawing inferences when reading a lengthy story.	Subjects were third- and fifth-grade pupils: younger children made fewer inferences than older ones when the component premises for an inference were located in separate paragraphs; younger children made more inferences when the component premises were located in the same paragraph in the story.	-

2.4.1 SUMMARY OF FINDINGS OF RESEARCHERS ON INFERENTIAL READING COMPREHENSION IN PARTICULAR

1. Reading comprehension necessarily implies the ability of the reader to draw inferences (Carr, 1983: 518; McIntosh, 1985: 755).
2. Inference plays a major role in reading comprehension: the better the reader, the more he is capable of making inferences. The ability to infer may therefore be taken as a measure of reading comprehension (Wilson and Hammill, 1982: 424; Oakhill, 1984: 39).
3. Pupils can be trained to develop inferential reading skills (McIntosh, 1985: 755; Escoe, 1984: 226; McCormick and Hill, 1984: 219; Carr, 1983: 18; Brimble, 1986: 84).

4. Inferential reading comprehension requires problem-solving strategies on the part of the reader (Holmes, 1985: 542), thus the ability to reason and think logically (Kavale and Schreiner, 1979).
5. Inferential reading comprehension correlates positively with decoding ability (Allen, 1985: 603; Lloyd, Kosiewicz and Hallahan, 1982; Beck et al., 1982).
6. Both good and poor readers are able to draw inferences (Malicky and Schiebein, 1981: 335). Given the evidence in no. 2 above, this, of course, must be a matter of degree: the quantity and quality of the inferences will differ from poorer to better reader.
7. Younger children who still need to focus effort on decoding tend to make fewer inferences than older ones (Allen, 1985); inferential reading skills are therefore, like cognition in general, developmental.

2.5 MORE DETAILED DISCUSSION OF PARTICULAR EXPERIMENTS RELEVANT TO INFERENCEAL COMPREHENSION

Thorndyke sees inference as a process of utilizing stored information (e.g. one's knowledge of the world). Inference also involves pragmatics and the conventions that govern relationships between author and reader (such as conversational implicature and presuppositions): The comprehender determines "the meaning of each individual sentence of a discourse and integrate[s] it with information he already knows and with other information contained in the text". (1976:437).

Inferences include the knowledge that the reader himself brings to the text so that all its implications may be realized.

Hansen and Hubbard (1984) believe that poor readers use the same cognitive strategies as good readers. It is thus a mistake for the teacher of "disabled readers" to concentrate on literal comprehension. Poor readers have problems with inference either because they lack training in inference or their background knowledge and experience are deficient. This contradicts the findings of other researchers (Oakhill, 1984; Holmes, 1985). Training in inference and the provision of background knowledge and experience should enable learners to generate inferences. Hansen and Pearson (1983) claim that poor readers infer regularly in their daily lives. They are thus capable of inference and will benefit from instruction in inferential reading skills. In their study, poor readers receiving instruction in inferential skills performed better than a comparable control group. The good readers could infer as well before, as after treatment.

The present experiment builds on but differs from Hansen and Pearson's in that the subjects were required to generate inferential questions. This requires the exercise of greater linguistic and cognitive skills. Another difference is that, in the present study, both poor and good readers received the same instruction in inferential reading skills.

Paris and Lindauer (1975) found that because younger children generated fewer inferences, their understanding and memory of separate sentences was reduced: the generation of inferences facilitated the retrieval, retention and recall of information. Their experiment was confined to memory of separate, disconnected sentences. Normally the reader seldom processes single, separate sentences. In connected discourse the reader must generate a network of interrelated, interdependent inferences (Davey and Macready, 1985: 540).

Paris and Lindauer's experiment suggests that inferential skills aid the learner to incorporate new information into

existing cognitive structure. Inferencing therefore enables the learner to retain information in long-term memory.

The present investigation uses connected discourse to test inference because teachers in training are required to interpret prose passages rather than isolated sentences.

Davey and Macready note that inference generation requires the reader to identify the main ideas in a text, to relate these ideas to his prior knowledge, to integrate such ideas according to his purpose in reading the text, to construct an appropriate question and to provide possible responses to his self-generated question (1985: 541).

In their experiment, reader-generated inferential questions posed greater difficulties for both high and low reading achievement groups than experimenter generated questions.

Inferencing tapped a general latent trait. Subcategories of inference (main ideas, text-connecting inference and within-sentence inference) were manifestations of the same general trait. Previous experiments on the interrelationship between subcategories of inference have used rather simple narrative texts (op. cit.: 550). Expository texts require more complex interrelationships between subcategories of inference (Olson, 1982). The present experiment uses expository text because it lends itself more readily to inference generation than does narrative text.

Davey and Macready's subjects were not trained in inference generation. The subjects of the present study were.

Miyake and Norman's (1979) experiment confirms that more questions are asked by the reader when there is a good match between his background knowledge and the complexity of the text itself. Trained subjects asked more questions of difficult text than did novices. The more complex and

unfamiliar the text, the fewer questions novices were able to ask. The text in the present experiment dealt with advertising, a familiar facet of everyday life.

André and Anderson (1979) studied reader-generated questions. The training period in question-generation consisted of two fifty-minute sessions. (The author believes that this is too short for training in such a complex strategy.) Reader-generated questions benefitted low verbal-ability more than high verbal-ability subjects. André and Anderson concluded that low verbal-ability subjects were now being asked to use a strategy which was more effective than that which they normally used.

2.5.1 Summary of findings of experiments relevant to the present study.

The major conclusions emanating from these studies on inference can be divided into three groups:

1. Inferential thinking as a process.
2. The effects of training in inferential skills.
3. The type of text used for training in inference.

The process of inferential thinking

Inferential reading skills consist of a process of integrating text-internal and text-external information (Thorndyke, 1976: 437). It involves the interaction between the reader's background knowledge and information provided by the text itself.

The effect of training in inference

Reader-generated inferential questions are more difficult for both low-and high-ability groups (Davey and Maccready, 1985: 541). The degree to which poorer readers can be trained to produce inferences is controversial. Some researchers believe that training is beneficial (Hansen and Hubbard, 1984), others that a deficiency in the problem-solving strategies involved in inference could be inherent (Oakhill, 1984; Holmes, 1985). The efficacy of training in inferential skills is thus in doubt. Good readers probably already possess problem-solving strategies and will not benefit by training (Hansen and Pearson, 1983).

It is agreed, however, that reader-generated inferential questions are more difficult for both low and high reading-ability groups (Davey and Maccready, 1985: 541).

The type of text used

In experiments on inference, the type of text selected is important since expository text requires more complex inferential interrelationships than narrative text (Olson, 1982). Experimental work on inference has usually been confined to the interpretation of separate sentences as opposed to chunks of connected discourse. As this would be inappropriate for teacher trainees, the author chose a text on advertising to test inference generation. It did not demand specialized knowledge. The experiment would reveal the effects of inferential skills training on both low- and high-ability groups.

2.6 CONCLUSION

Low-status and high-status EL2 college students may or may not benefit from training in inference for different reasons: low-status students may benefit because they lack

training in inferential skills. On the other hand they may not benefit because they are deficient in problem-solving strategies. High-status students may also not benefit because they already possess problem-solving strategies.

2.7 PROGRAMMED READING DEVELOPMENT: THE SRA READING LABORATORIES. ADVANTAGES AND DISADVANTAGES OF PROGRAMMED READING

Ausubel (1969: 324-337) discusses the principles and advantages of programmed instruction:-

- Each learning task has a clearly defined objective.
- The learning task is broken down into smaller units to reduce error; this increases the learner's sense of success and reduces his sense of failure.
- Smaller tasks are sequenced and graded so that the learner achieves each objective before he passes to the next.
- The learner receives immediate feedback.
- Each student moves at his own pace in competition with himself and not his peers. Slower students receive more practice than quicker ones.

Ausubel also criticizes programmed learning as it "tends to fragment the ideas presented in the programme so that their interrelationships are obscured and their logical structure is destroyed" (op. cit.: 333).

There are also objections to the boredom engendered by and the multiple-choice answer format favoured by the originators of programmed learning. It seems to the author that

programmed learning may be more suited initially to low-progress learners and in remedial courses.

The above-mentioned principles governed the design of the Science Research Associates Reading Laboratories.

2.7.1 PRINCIPLES OF PROGRAMMED READING IN THE SRA ,

The following features of programmed reading courses like the SRA are regarded as relevant to this study.

- Operational objectives:

The promotion of reading skills such as comprehension and vocabulary building, the development of reading rate and listening with attention.

- Reinforcement of discrete- point items:

Practice, repetition and reinforcement are built into the SRA. Students learn to respond correctly during a long period of conditioning.

- Sequencing and grading of material:

Power Builders, Rate Builders and Listening Skill Builders consist of graded passages followed by multiple choice questions. Readability indices of the passages gradually increase.

- Feedback

The availability of colour-coded answer keys ensures immediate feedback.

- Individualized learning

Each student starts at his own level, progresses at his own pace and corrects his own answers.

2.7.2 THE SRA: EXPERIMENTAL FINDINGS

Some investigations support and others deny the claims of the designers that the SRA Reading Laboratories promote reading comprehension more than traditional strategies:

Pont's (1966) investigation revealed no significant gains in reading comprehension. Neither did Jones and Van Why's 1968 experiment (In Pienaar, 1969: 110-147). However, Moore's (1968) experiment produced "a mean effect to the extent of 11% additional improvement in scores over that shown by control pupils" when "reading for meaning" was measured (In Pienaar, 1969: 113).

Fawcett (In Lunzer and Gardner, 1979: 227) reports substantial gains made by both weak and able secondary school children. The SRA did develop reading rate, accuracy of reading, vocabulary and understanding of the material read.

The greatest single deficiency in all these investigations is the failure of the researchers to distinguish between literal and inferential meanings. All the reports refer vaguely to reading comprehension scores. The point at issue is whether the SRA promotes inferential as well as literal skills. Because the distinction is critical, the present study measures both skills.

2.8 COGNITIVE LEARNING

Raubenheimer (1983: 88-97) lists the following principles of cognitive learning theory:

- The learner is himself responsible for making sense of the world. By means of a rationalist process he relates new information to his existing cognitive structures.
- The learner has greater choice in selecting information he wishes to master. He is not dependent on the selection of a fragment presented to him by the instructor.
- The mastery of content is subservient to the mastery of cognitive skills. The maturer learner should make a detailed study of cognitive processes.
- The function of the instructor is to stimulate, guide and inform the learner.
- Learning is effective if the learner sees the subject matter and tasks as meaningful and relevant to his purpose.
- Drills and mechanical aspects of learning should be limited while the role of attitudes, motivation and self-image should be stressed.
- Provision should be made for small-group discussion to facilitate peer group learning.

2.9. A COGNITIVE READING COMPREHENSION STRATEGY

The following features of the strategy employed in the present study may be regarded as cognitive:

- Learner-generation of a range of questions on, and answers to a text. The application of a taxonomy of reading comprehension subskills by the teacher trainee when setting questions on a text. (see Appendix XII for the taxonomy).
- Detailed instruction in taxonomies of reading comprehension subskills; emphasis on the cognitive strategies involved in reading.
- Emphasis on the fact that primary school teachers need to teach inferential as well as literal meanings in their classrooms.
- Pair and group work for open discussion and interactive communication in the target language.
- Emphasis on linguistic skills and the development of accuracy.

(See Appendix XIII for a detailed description of the cognitive reading comprehension development programme employed in the present study).

2.10 SUMMARY OF CHAPTER 2

1. The views of some advocates of cognitive learning theory are outlined.
2. Discussion of models of reading comprehension: they apply as much to learning in general as to reading in particular. The author proposes his own model based on cognitive as opposed to programmed learning strategies.
3. Review of the investigations into the improvement of reading in general and inferential skills in particular.

Lack of controls and statistical evidence weaken the investigators' conclusions.

4. The crucial role of inference emerges.
5. The evidence for the efficacy of the SRA in promoting cognitive skills is weighed.
6. An alternative cognitive strategy for EL2 teacher trainees is proposed.

CHAPTER 3

THE EMPIRICAL INVESTIGATION:

OBJECTIVES, SAMPLE, EXPERIMENTAL DESIGN, HYPOTHESES, MEASURES, AND COURSE MATERIALS.

3.1 OBJECTIVES OF THE INVESTIGATION

The objectives of this investigation were to test and design a reading comprehension programme which would promote the thinking skills of EL2 primary school teachers and thus aid them to become critical, independent thinkers who are capable of interpreting texts at their deeper rather than merely surface levels. The author-constructed instructional programme aimed at counteracting the present tendency of EL2 college trainees to teach merely literal at the expense of thinking skills in their classrooms.

To achieve that overall aim, the author would have to establish:

1. whether the SRA Reading Laboratory programmes would improve the inferential (i.e. thinking) reading comprehension skills of EL2 college students, and, if not,
2. whether the author-constructed cognitive strategy would significantly improve their inferential skills,
3. which sequential combination of the two above-mentioned instructional strategies would prove more effective when used in a reading comprehension training programme over a period of approximately nine months,
4. whether those students who were less proficient in EL2 (low-status) would perform differently during varying

sequences of strategies compared to those who were proficient in English (high-status students),

5. whether any differences existing between the post-training test scores of the high-status and the low-status students would be maintained when the concluding test was administered twelve months after formal training ceased.

The overall objective would thus be to determine both the short-term, and equally important, the long-term effects of training in inferential reading comprehension.

3.2 THE SAMPLE

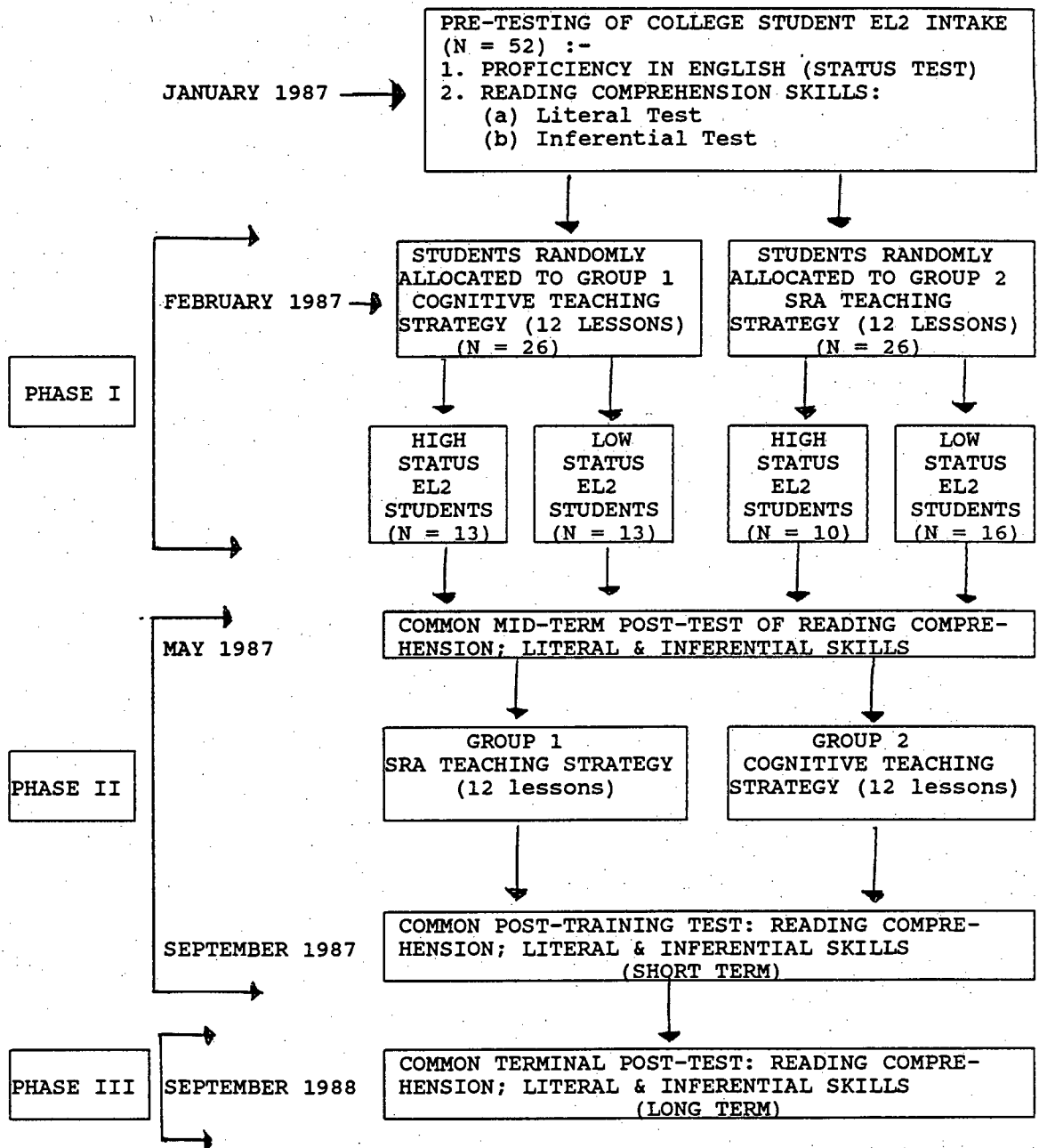
Studies were conducted during 1987 and 1988 on a sample of fifty-two first-year EL2 students at one Cape Province college of education.

The college is a rural institution with the Afrikaans language as medium of instruction. Most students have little social contact with English outside the classroom.

The students constituted the first-year intake for the Primary School Teachers' Diploma in Education. The Senior Primary Diploma Course was designed to equip them to teach Standards 2, 3, 4 and 5 pupils and the Junior Primary Diploma, Sub-Standard A and B and Standard 1 pupils. The student intake comprised 47 females and 5 males ranging in age from 17 to 19 years.

3.3 THE EXPERIMENTAL DESIGN

In January 1987 the 52 subjects were randomly assigned to two groups, 1 and 2 (see Fig 3). Each group contained both high-status (proficient in English) and low-status students.



THE EXPERIMENTAL DESIGN

(FIGURE 3)

English proficiency was determined by student scores in Kitching's (1984) A Test of Proficiency in English. Students scoring 61% and more were classified as "proficient" and those scoring less than 61% were regarded as "improficient". (i.e. below the level of competence in EL2 deemed necessary for teaching the subject)

In PHASE I, students in Group 1 were taught by the author using a cognitive strategy. Group 2 were taught by a colleague, co-head of the English Department, using the SRA Reading Laboratories. In PHASE II, which commenced in May 1987, the instructional strategies for the two groups were reversed. Group 2 received instruction via the cognitive strategy, while Group 1 were taught by a colleague of the author's using the SRA Reading Laboratories.

During PHASE I (12 lessons of one hour each per week), Group 1 were guided in a self-questioning strategy. This cognitive strategy required the students to generate both literal and inferential questions together with their answers on a prose text. Categories of literal and inferential questions were based on Lunzer and Gardner's (1979) taxonomy of reading comprehension subskills. Group 2 were taught by means of the SRA Reading Laboratories (henceforth called simply "the SRA"). The PHASE II lessons were of the same duration but the order of the reading strategies was reversed to offset the effects of sequencing two different strategies with the same subjects.

Thus, from January 1987 to September 1988 students' scores were obtained using four parallel batteries of tests of both literal and inferential reading comprehension administered as follows:

- (a) A pretest - January 1987.

- (b) A common mid-term post-test (after 12 weeks of instruction) - May 1987.
- (c) A common post-training test (after 24 weeks of instruction) - September 1987.
- (d) A common terminal post-training test (i.e. the test mentioned in (c) above repeated 12 months after formal training ceased) - September 1988.

Each student thus received 24 hours training in literal and inferential reading comprehension skills: 12 hours via the SRA and 12 hours via the cognitive strategy.

Twelve months after the termination of the formal training programme the students' reading comprehension skills were remeasured (PHASE III) to determine the long-term effects of instruction.

3.4 THE HYPOTHESES

The experiment was designed to test the following hypotheses:

Hypothesis No. 1 Inferential Scores, SRA Strategy

That the INFERENTIAL test scores of high-status students (proficient in English) will increase significantly relative to the inferential test scores of low-status EL2 students, when both groups receive equal instruction using a 12-session SRA strategy.

Hypothesis No. 2 Inferential Scores, Cognitive Strategy

That the INFERENTIAL test scores of high-status students will increase significantly relative to the inferential test scores of low-status EL2 students, when both groups receive equal instruction using a 12-session COGNITIVE strategy.

Hypothesis No. 3 Literal Scores, SRA Strategy

That the effect of the SRA strategy on the attainment of LITERAL test scores of both experimental Group 1 and experimental Group 2 will be to significantly close the gap in performance between the low-status and the high-status students.

Hypothesis No. 4 Literal Scores, Cognitive Strategy

That the COGNITIVE strategy will not significantly change the LITERAL test scores of the low-status students relative to those of the high-status students in either experimental Group 1 or experimental Group 2.

Hypothesis No. 5 Long-term Inferential Scores

That the September 1987 gaps existing between the mean inferential test scores of the high-status and low-status students will be maintained in the long term (after 12 months, i.e. until September 1988).

Hypothesis No. 6 Long-term Literal Scores

That the gaps existing between the mean literal test scores of the high-status and low-status students will also be maintained in the long term (after 12 months, i.e. until September 1988).

Testing these hypotheses would enable the author to determine both the short-term and long-term effects of using the SRA and a cognitive strategy to train EL2 college students in reading comprehension.

3.5 THE MEASURES

Students' scores were obtained using parallel batteries of tests of literal and inferential reading comprehension administered over a period of twenty-four months:-

Four measuring instruments were employed:

1. Kitching's (1984) A Test of Proficiency in English to determine the initial status (high or low) of the EL2 college students. The test measured usage, writing, punctuation and reading skills. This status test was scored by three independent assessors and moderated by the researcher. (See Appendix VI for this test).
2. An initial, and two subsequent researcher-constructed tests of literal and inferential reading comprehension. These three tests appear in Appendix X. The simplified

texts were based on three passages taken at random from "The Hidden Persuaders" (Packard, 1957). A random selection of scripts was marked by the co-head of the English Department at the teachers' college. All the scripts were marked "blind" i.e. with the students' names concealed. Examples of students' responses to the author's tests appear in Appendix I. Students' scores obtained for the reading comprehension tests appear in Appendix IV.

The Fry Graph (1977) and the Flesch Formula (Harrison, 1980) were applied in an attempt to ensure that the readability indices of the three passages chosen were comparable. The calculated readability indices are presented in Appendix XI.

The Fry Graph indicated a readability level of 12 years for each of the passages. The Flesch Formula yielded closely comparable scores.

3.6 PROCEDURE FOR GATHERING THE DATA

In order to gather the data which would test the hypotheses, the following steps were taken:

1. The subjects were rank-ordered from high- to low-status proficiency in EL2 [High-status = 61-100%; low-status = 0-59% obtained in "A Test of Proficiency in English" (Kitching, 1984)]
2. The six scores obtained by each candidate for language and reading comprehension were recorded (See Appendix IV).
3. The sequence of the two instructional treatments for each subject was recorded (i.e. Cognitive Strategy first or SRA strategy first) (See Appendix IV).

4. The number of subjects in the following subcategories was established:

- (a) the number of high-status subjects
- (b) the number of low-status subjects
- (c) high-status subjects beginning with the Cognitive Strategy
- (d) low-status subjects beginning with the SRA Strategy

The following figures were obtained:

- A. High-status $N = 23$ of whom 13 began with the Cognitive Strategy and 10 with the SRA Strategy.
- B. Low-status $N = 29$ of whom 13 began with the Cognitive Strategy and 16 with the SRA Strategy.

5. The average pre-test, mid-term post test, post training test, and terminal post-test scores were calculated for the following categories of tests and numbers of subjects.

- (a) Inferential test scores for half the class ($N = 26$) - Cognitive Strategy first:

Hi-status $N = 13$

Lo-status $N = 13$

- (b) Literal test scores for other half of the class ($N = 26$) - SRA Strategy first:

Hi-status $N = 10$

Lo-status $N = 16$

- (c) Inferential test scores for half the class - SRA Strategy first:

Hi-status N = 10

Lo-status N = 16

- (d) Literal test scores for other half of the class - Cognitive Strategy first:

Hi-status N = 13

Lo-status N = 13

(See Appendix V for averages obtained)

6. The graphs of the average scores obtained in 5 above were plotted. (See Chapter 4 for the graphs)

These graphs clarify the interrelationships between the instructional strategies employed and the literal and inferential test scores obtained by the subjects. The gaps between the scores of the high-status and low-status subjects represent the effects of the two instructional strategies upon the reading comprehension skills of the students.

3.7 COURSE MATERIALS

The two reading development courses, each of 12 sessions, were the well-known, commercially available SRA Reading Laboratories, Numbers IIc, IIIb, and IVa and a researcher-constructed cognitive programme based on a modified version of Lunzer and Gardner's (1979) taxonomy of reading comprehension subskills.

The author's cognitive programme is detailed in Appendix XIII.

Examples of SRA reading comprehension units appear in Appendix XIV.

3.8 THE DESIGN AND DEVELOPMENT OF THE MEASURES AND THE COURSE MATERIALS

3.8.1 A TEST OF PROFICIENCY IN ENGLISH (Kitching, 1984)

The range, mean, standard deviation and distribution of scores obtained by Kitching's (1984) and by the author's (1987) sample populations are compared in Appendices VIII and IX. The ranges, medians, means and standard deviations of Kitching's 1984 and the author's 1987 sample populations are comparable especially in view of the smaller 1987 population.

The proficiency test was marked and scored by three independent examiners, all senior lecturers in English and then moderated by the author (See Appendix VII for the examiners' and the author's scores).

A Test of Proficiency in English has been in use at the college of the sample student population from 1985 to the present and has proved to be a dependable predictor of the status of EL2 college students with regard to their proficiency in English and therefore dependable for the purpose of rank-ordering the students in the experiment.

(See Appendix VII for rank-ordered proficiency scores)

3.8.2 THE TEST OF LITERAL AND INFERENTIAL READING COMPREHENSION SKILLS

Copies of these performance tests appear in Appendix X.

Since meanings in language are derived from deep as opposed to surface structures and language is an instrument of

thought, the students were required to interact with a prose text by exploring its meaning in a series of self-generated questions and answers. (See Chapter 2 for theories of human learning).

Students were required to generate questions and provide their answers because:

- self-generated thinking questions and answers elicit the student's linguistic performance more readily than the traditional teacher-generated questions. The testee cannot now rely on merely quoting verbatim from the text;
- teachers must be able to generate inferential questions as part of their daily tasks. Since genuine communication is interactive and unpredictable, teachers must be ready to answer the thinking questions of their pupils too. There is ample evidence that many EL2 teachers are still bound by the handbook owing to their lack of confidence in their proficiency in English;
- literal questions are subordinate and establish basic textual meanings (Lunzer and Gardner, 1979); inferential skills are superordinate, tap cognitive strategies and are crucial to reading comprehension (Mc Intosh, 1985: 755; Holmes, 1985: 542; Carr, 1983: 518). Inferencing skills are now generally accepted as measures of reading ability (Oakhill, 1984: 39; Davey and Macready, 1985: 541).

3.8.3 READABILITY MEASURES

Readability measures are not always reliable (Harrison, 1980: 115). Two measures with equal ceilings (i.e. a maximum reading level of 18 years), were therefore chosen: the Fry

Graph and the Flesch Formula. The scores they provide are only approximations of the difficulty of a text (op. cit.: 109). Most readability measures were developed in the USA. Studies have, however, revealed that the American formulae are also valid in the UK (op. cit.: 152). Bill (1985: 18) warns that a text classified as "easy" by means of a count of word and sentence length may be "difficult" because the language is highly idiomatic or "contains cultural referents which lie totally outside the reader's frame of reference".

Advertising does lie within the college student's frame of reference and the passages are not highly idiomatic. In fact, much of their content is factual. The three passages were chosen from the same publication, both the Fry Graph and the Flesch Formula were employed and similar readability indices were obtained. However, the mid-term post-test in May 1987 subsequently proved to be more difficult than the pre-test in January 1987 and the terminal post-test in September 1987. The effect of this feature is discussed in Chapter 4.

Appendix XI summarizes the calculations which produced the readability indices for the three passages.

3.8.4 PILOT TEST OF LITERAL AND INFERENTIAL READING COMPREHENSION SKILLS

See Appendix XA for a copy of this test. Nine EL2 second-year college students were given this test as a pilot study.

See Appendices II and XA for a copy of the score sheet and instructions to the scorer.

Appendix III shows the scoring of the pilot test by the author and the moderator. Scoring proved to be comparable.

Appendix IV gives the raw scores of all the subjects in the four tests of reading comprehension. Again, the moderator's and the author's proved to be comparable. One can therefore conclude that the "Test of Literal and Inferential Reading Comprehension Skills" is a valid measure of subordinate and superordinate reading comprehension skills and that all the tests were dependably scored.

3.8.5 THE COURSE MATERIALS

The SRA Reading Laboratories

The design and properties of the SRA are meticulously detailed in the instructor's handbook that accompanies each laboratory. Only those aspects of this reading programme which contrast with the author's cognitive reading development programme are mentioned. See Appendix XIV for "Sample Instructional Material from SRA Reading Laboratory".

The SRA is an individualized reading development programme with the following features:

- graded and sequenced materials to promote mastery of easy materials first,
- limited opportunities for interactive communication between instructor and learner,
- programmed multiple-choice questions,
- self-correction and self-evaluation of learner's responses.

Compared with the author's cognitive reading development programme, the SRA is a relatively "closed" system.

The Cognitive Reading Development Programme.

(See Appendix XIII for the twelve units taught during the training period).

The features of the cognitive programme are enumerated in terms of the major differences between the principles of cognitive and programmed learning:

- the development of cognitive reading comprehension skills such as self-questioning strategies,
- the programme reflects a holistic view of the nature of cognitive skills,
- communicative interaction via small-group discussion,
- rules of English linguistic structure are frequently discussed and error analysis techniques applied,
- materials are chosen to serve the needs of the learners in a particular field of study or subject matter,
- writing skills are actively developed.

The cognitive programme could be described as a relatively "open-ended" system which can be modified ad infinitum.

To sum up, the cognitive programme makes considerable demands on the language and thinking skills of the learner, while the SRA demonstrates the considerable skills of the programme designers.

3.9 PROCEDURE

The EL2 first-year Diploma in Education students received instruction in reading comprehension skills via two

strategies during regular English lectures for one hour once per week. Attendance was compulsory throughout the two training periods of 12 weeks each.

When formal instruction in reading comprehension skills ceased, the students proceeded with their regular classes in English. Reading then became incidental to the general programme of work in English, which they were studying as a curriculum subject.

3.9.1 STATISTICAL ANALYSIS

t-tests were carried out to compare the different average scores in literal and inferential reading comprehension of the low-status and the high-status students relative to each other and not relative to an absolute standard of performance. This was necessary because the mid-term post-test was apparently more difficult than the pre-test and the terminal post-test despite the application of measures of readability to the three prose passages selected. (N = 52 in 1987; N = 49 in 1988 : three students had discontinued their studies in their second year).

Repeated measures analysis of variance were used to detect significant relationships between the high- and the low-status students' achievement scores for "A Test of Proficiency in English" and their scores for literal and inferential reading comprehension for Phases I, II and III of the experiment.

The graphical representations of the average scores are found in Chapter 4 (Results), and the tables of repeated measures analysis of variance are found in Appendix XV.

3.10 SUMMARY OF CHAPTER 3

Because there was evidence that EL2 primary school teachers emphasized literal reading comprehension skills at the expense of cognitive skills, a small sample of 52 EL2 Afrikaans-speaking first-year teacher trainees was selected for an investigation into their reading comprehension skills. This sample population was classified as either high-status or low-status as assessed in an EL2 language proficiency test. The sample received instruction in two reading comprehension strategies. Their pre-training, mid-term post-training, post-training, and long-term post training scores of reading comprehension were then recorded.

The measures and course materials were listed and their validity and reliability described. The rationale for and properties of the course materials were also explained. Readability measures were discussed in general and indices for the passages selected for instruction were calculated.

A pilot test established performance criteria for the reading skill measurements applicable to the three tests of reading comprehension. Finally, the procedure for the instructional programmes was outlined and the format of the statistical analysis described.

CHAPTER 4

RESULTS

4.1 INTRODUCTION

This chapter will reveal the significant differences in mean performance between high-and low-status EL2 students as well as the effect that the cognitive instructional strategy apparently produced on the students' thinking skills, both in the long and the short term.

4.2 GRAPHICAL PRESENTATIONS

Graphs A, B, C and D (Figures 4.1 to 4.4) depict the relative changes in mean inferential test scores and mean literal test scores of Groups 1 and 2. These changes occurred when the students were subjected to alternating sequences of instruction using the Cognitive Strategy and the SRA Strategy, and when retested after 12 months. **Changes in the mean performances of the different groups of students should be examined relative to each other rather than relative to an absolute standard.**

Overall, student performances 12 months after formal training ceased, reveal a tendency for the gaps between the mean terminal post-test scores of the high-and low-status students to be reduced. It appears that low-status students need a longer period of instruction in which to develop their linguistic and reading comprehension skills.

GRAPH A

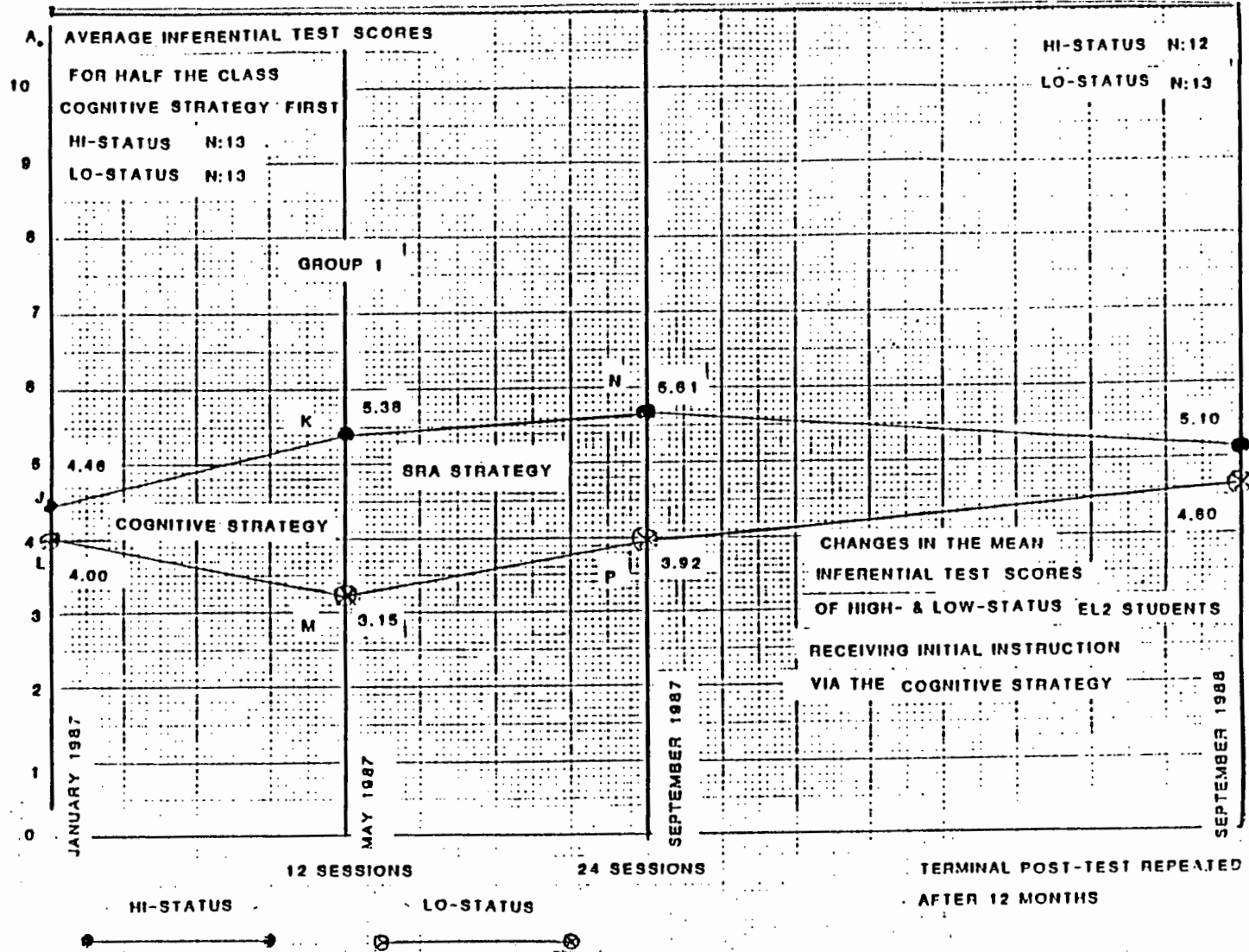


Figure 4.1

Changes in the mean inferential test scores of high- and low-status EL2 students receiving initial instruction via the cognitive strategy.

GRAPH B

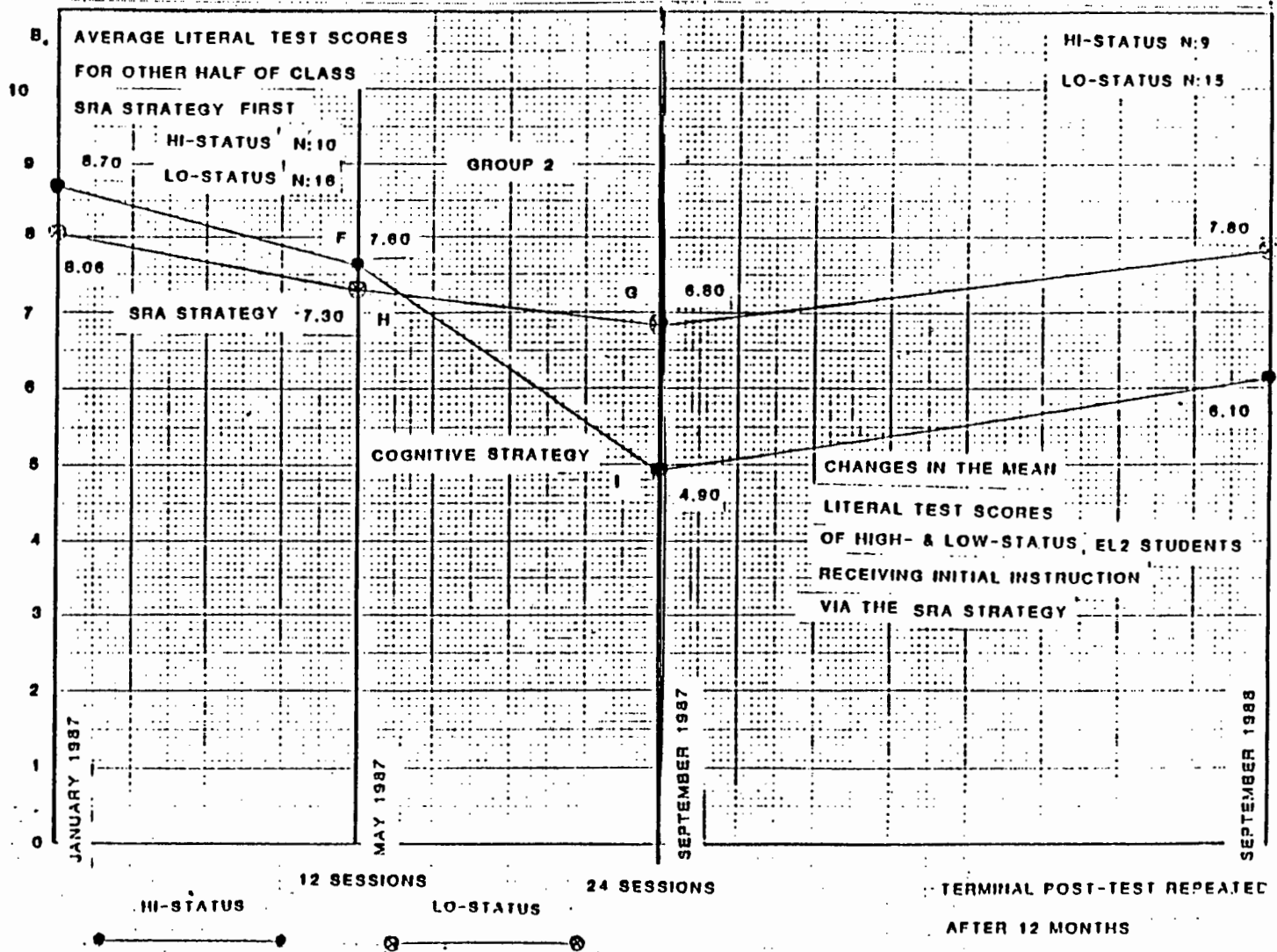


Figure 4.2

Changes in the mean literal test scores of high- and low-status EL2 students receiving initial instruction via the SRA strategy.

GRAPH C

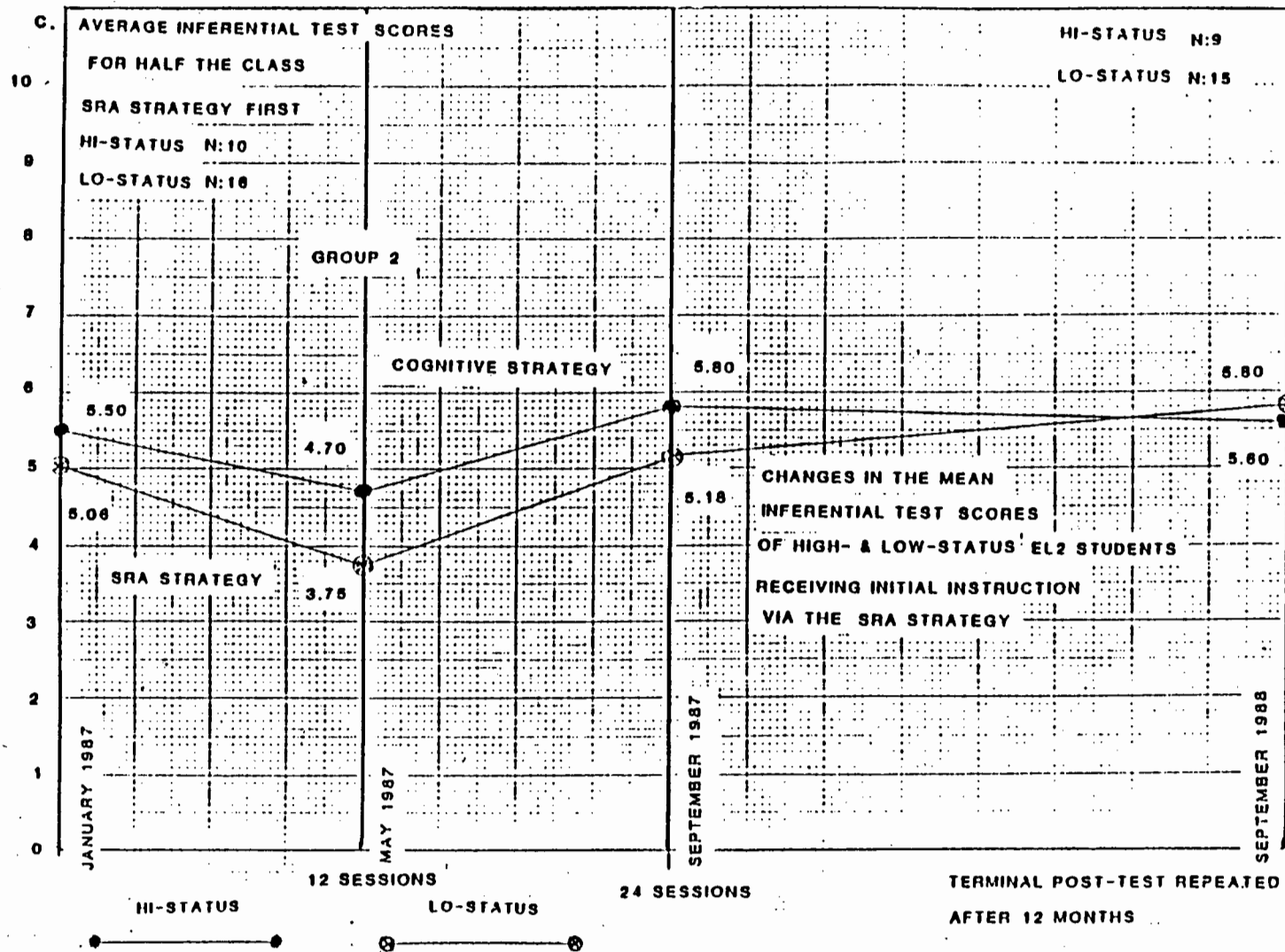


Figure 4.3

Changes in the mean inferential test scores of high- and low-status EL2 students receiving initial instruction via the SRA strategy.

GRAPH D

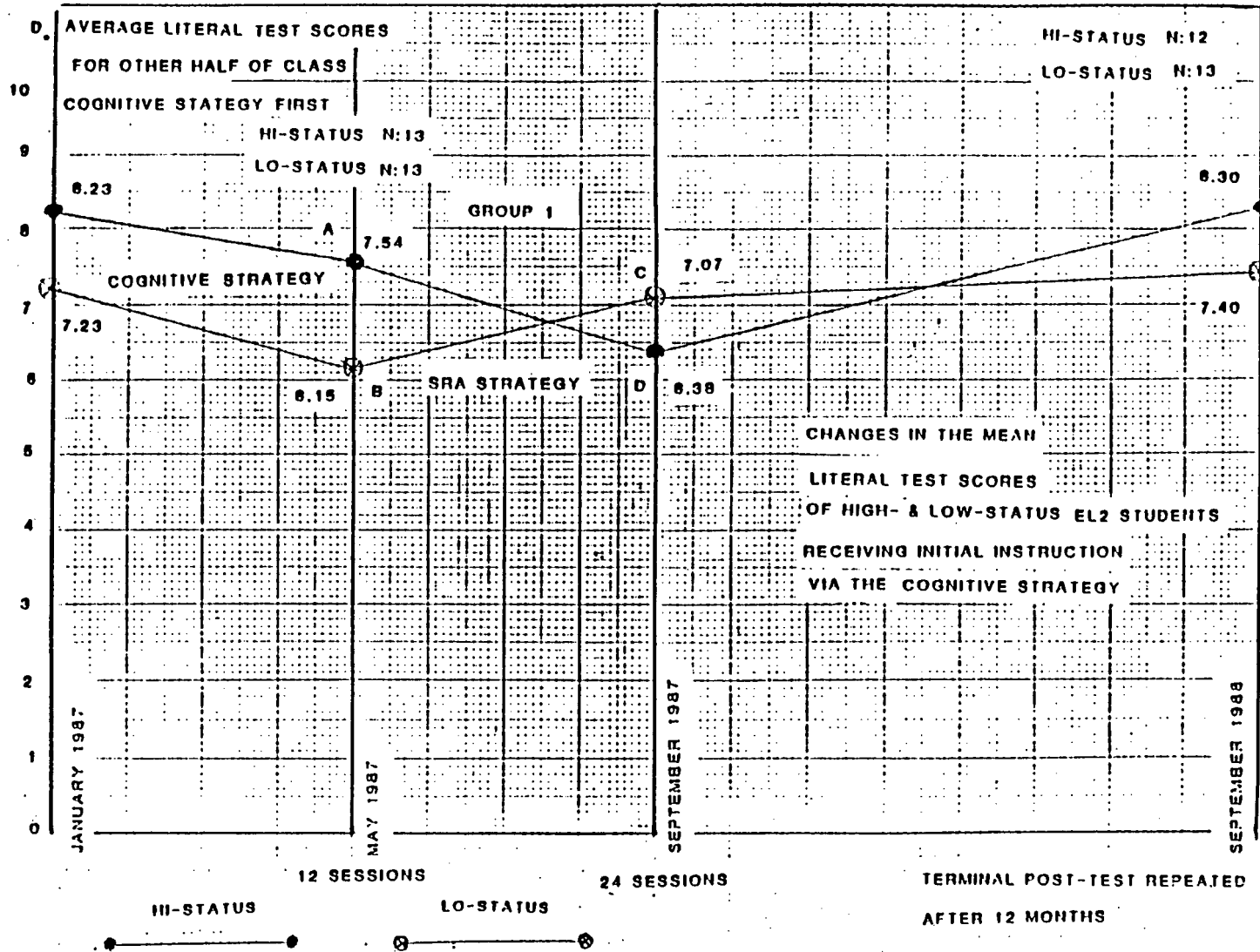


Figure 4.4

Changes in the mean literal test scores of high- and low-status EL2 students receiving initial instruction via the cognitive strategy.

4.3 CONFIRMATION OR REFUTATION OF THE HYPOTHESES

4.3.1 HYPOTHESES NO. 1

INFERENTIAL GAINS USING THE SRA STRATEGY

Hypothesis No. 1 was refuted with Group 1 but not with Group 2. Graphs A and C illustrate how 12 sessions of instruction via the SRA strategy affected the inferential test scores of the high-status students relative to the scores of the low-status students.

Using a repeated measures analysis of variance, the effect of the SRA strategy on the inferential test scores of Group 1 appeared to significantly close the gap between the high-status and the low-status students.

($F = 6.50$, $p = 0.001$, Table 4.1, Appendix XV). However, another possible cause might be the linguistic maturation of the low-status sub-group.

However, as regards Group 2, the effects of the SRA Strategy on the inferential test scores of high-and low-status students were comparable ($F = 1.54$, $p = 0.23$, Table 4.2).

4.3.2 HYPOTHESIS NO.2

INFERENTIAL GAINS USING THE COGNITIVE STRATEGY

Hypothesis No. 2 was supported with Group 1 but refuted with Group 2. When Group 1 (Graph A) received instruction with a 12-session cognitive strategy, the mean inferential test scores of the high-status EL2 students did increase significantly relative to the mean inferential test scores of the low-status EL2 students. Using a repeated measures analysis of variance, the effect of the cognitive strategy on the high-status students compared with that of the low-status students was highly significant.

($F = 2.88$, $p < 0.05$, Table 4.3). However, when Group 2 were instructed in a 12-session cognitive strategy (Graph C),

neither the high- nor the low-status EL2 students were favoured on inferential tests. ($F = 0.80$, $p = 0.50$, Table 4.4).

Reasons are advanced in Chapter 5 (Discussion of Results) why the sequence of presentation of the cognitive strategy apparently favoured the high-status students on inferential tests during the first period of 12 sessions (Graph A), but not during the second period of 12 sessions (Graph C).

4.3.3 HYPOTHESIS NO.3

LITERAL SCORES USING THE SRA STRATEGY

Hypothesis No. 3 was confirmed for Group 2. (Graph B). Analyses of variance show that the SRA Strategy significantly improves the performance of low-status students on tests of literal comprehension relative to the performance of high-status students.

(Group 2 : $F = 5.15$, $p = 0.01$, Table 4.5).

Hypothesis No. 3, however, was unexpectedly refuted with Group 1 (Graph D), when an analysis of variance was used. This was due to the particularly large variance in the scores of the Group 1 low-status students on test 2 (May 1987) after 12 sessions of instruction.

($F = 1.33$, $p = 0.28$, Table 4.6).

4.3.4 HYPOTHESIS NO.4

LITERAL SCORES USING THE COGNITIVE STRATEGY

Hypothesis No. 4 was refuted with Group 2 (Graph B)

($F = 5.71$, $p < 0.01$. Table 4.8), but confirmed with Group 1 (Graph D) ($F = 2.57$, $p = 0.07$ Table 4.7).

A possible interpretation of these results is that, once again, different instructional strategies have significantly different effects on Group 2 but not on students in Group 1.

This finding clearly suggests that the optimally effective sequence of strategies for low-status students is the SRA followed by the cognitive strategy in order to promote the acquisition of LITERAL skills.

4.3.5 HYPOTHESES NO.5 AND 6

POST FORMAL TRAINING (AFTER 12 MONTHS); LONG-TERM INFERENTIAL AND LITERAL SCORES FOLLOWING THE IMPLEMENTATION OF BOTH STRATEGIES

4.3.5.1 INFERENTIAL GAINS

Hypothesis No. 5 was confirmed with Group 1, (Graph A) ($F = 2.56$, $p = 0.07$ Table 4.9). Nevertheless, 12 months after formal training ceased, the gap between the mean scores of the low-status and high-status students did narrow. The low-status students appeared to have "caught up with" the high-status students by September 1988, almost significantly ($p = 0.07$).

Hypothesis No. 5 was, however, clearly refuted with Group 2 (Graph C). Twelve months after formal training ceased, the gap between the mean scores of the low-status and the high-status students disappeared: their mean scores became virtually identical. Again, the low-status students apparently "caught up with" the high-status students.

4.3.5.2 LITERAL GAINS

Hypothesis No. 6 was confirmed with Group 1 (Graph D). There were no significant interactions between status, time and instructional strategy between September 1987 and September 1988, probably due to the high variances (wide spread of individual scores) of the low-status sub-group on both September tests. ($F = 1.21$, $p = 0.32$, Table 4.10).

Hypothesis No. 6 was also confirmed with Group 2 (Graph B). By September 1988, 12 months after formal training ceased, the mean literal test score of the high-status students was not appreciably lower than that of the low-status students.

4.4 SUMMARY OF CHAPTER 4

1. EL2 college students are appreciably better at literal than inferential reading comprehension. Scores for inferential comprehension are relatively low.
2. The greatest difference between high-status and low-status EL2 college students lies in the superiority of the high-status students in inferential skills.
3. In the long term the differences in performance between high-status and low-status students tend to diminish significantly.
4. The SRA is associated with improved literal reading comprehension of low-status EL2 college students but is less efficacious with high-status students.
5. The SRA does not significantly change the inferential reading comprehension skills of high-status students.
6. The cognitive strategy appears to improve the inferential skills of high-status students sooner than those of low-status students. The cognitive strategy appears to benefit low-status students after they have undergone a longer period of linguistic maturation.
7. Low-status EL2 college students should commence their training in literal skills only. High-status students may commence their college training in inferential reading skills immediately.

CHAPTER 5

DISCUSSION OF THE RESULTS OF THE INVESTIGATION

5.1 INTRODUCTION TO CHAPTER 5

The experiment suggests that the quality of high-status EL2 students' inferential reading comprehension questioning strategies can be improved within a relatively short period and that of low-status students over a longer period. Cognitive reading comprehension instructional programmes could profitably be introduced into schools and teachers' colleges as a long-term investment in the development of the thinking skills of EL2 learners.

5.2 DISCUSSION OF THE FINDINGS

The students' generally low scores for inferential reading comprehension compared with those for literal comprehension stress the necessity for a well-planned instructional programme of self-generated inferential questioning strategies for all EL2 college students. The broader aims of education require intellectually stimulating primary school teachers who are confident of their ability to guide their pupils in critical thinking skills through their reading. EL2 primary school teachers who overemphasize literal reading comprehension skills are defeating these aims. This is also to the detriment of communicative language learning.

The similar average literal comprehension scores for both high-and low-status students is puzzling at first sight. However, it appeared that low-status students were also low risk takers. They tended to generate literal questions which required only verbatim quotations in the answers. By contrast high-status students appeared willing to take greater risks and tended to avoid merely verbatim quotations. They appeared to be more willing to expose

themselves to the risk of failure and criticism by setting more penetrating questions. Low-status students lacked the confidence to express themselves freely in English. Their hesitancy to contribute to class discussions confirms this view.

The subjection of the same learner to two different treatments in an experiment introduces a third variable which is difficult to control, namely the cumulative interactive effects of the two treatments on post-test scores. Did the fact that the cognitive strategy preceded testing for the one group but succeeded testing for the other significantly affect performance?

It is evident that the SRA did not train students to develop their inferential reading comprehension skills. The SRA might be emphasizing discrete point items at the expense of thinking skills. The SRA appears to be more efficacious at improving the literal reading skills of low-status learners.

The fact that the Cognitive Strategy increased the average inferential test scores of Group 1 high-status students but not those of Group 2 high-status students is puzzling. It may simply be that direct training in inference at the beginning of the first-year course had more dramatic effects on the students' thinking strategies in EL2. It was a novel strategy which the students had never come across at school.

Overall, a cognitive reading comprehension strategy, in contrast to the SRA, appeared to significantly improve the inferential reading skills of high-status English Second Language students.

The present course of instruction took place during the students' first year. Both high-and low-status students appeared to benefit from instruction and to maintain their reading comprehension skills after a year.

A regular, fully-blown instructional programme to develop the EL2 learner's inferential reading comprehension skills, introduced in schools and maintained throughout the three-year teachers' diploma course, should go a long way to maximize the benefits of the strategy.

5.3 DISCUSSION OF THE MEASURES AND THEIR LIMITATIONS

5.3.1 INTRODUCTION TO DISCUSSION

Since the author designed the reading comprehension tests for the testing of teacher trainees, his tests differ from the traditional standardised tests currently available and have certain limitations. These are discussed below.

5.3.2 A TEST OF LITERAL AND INFERENTIAL READING COMPREHENSION SKILLS

Testee-generated literal questions

Graphs B and D reveal the high average literal scores for both high- and low-status students. The test of literal comprehension probably did not discriminate sufficiently between these two groups. Additional author-generated literal questions would probably have provided a more reliable discrimination index.

Testee-generated inferential questions

The testees' ability to ask inferential questions did not mean that they could always answer their own questions (e.g. a good question on the irony in the passage sometimes produced a poor answer: training in inference had familiarized testees with the form but not the content of good inferential questions). Conversely low-status testees sometimes produced good inferential questions and answers but were severely handicapped by their linguistic

incompetence: they could think logically, but lacked writing skills.

Hence the need for a cognitive-linguistic reading comprehension strategy in reading instruction. However, the validity of a testee's questions-answers could invariably be established by consultation between examiner and moderator.

Scores for language

Scores for language allocated by the examiner compared to those allocated by the moderator produced the greatest divergencies owing to the acceptable-unacceptable usage controversy. Linguistic issues were solved by consultation. However, linguistic factors were not directly relevant to the scoring since comprehension and not language was measured.

The divergencies mentioned above point to the need for training in error analysis at colleges of education. If senior English lecturers do not always identify and classify language errors in the same way, how much more uncertain must EL2 teacher trainees be?

5.4 DISCUSSION OF THE COURSE MATERIALS AND THEIR LIMITATIONS

5.4.1 THE SRA

The limitations of the SRA lie in the difference between what the SRA claims to do and what it actually does. The only limitation in the way in which the SRA course materials were applied in this experiment lay in the duration of the programme. Most high-status subjects moved rapidly from easier (Laboratory IIC) reading levels to more advanced (Lab. IVa) levels during the 12 session training period: 12 sessions were sufficient to reach the Lab. IVa reading level. Some low-status subjects did not get beyond

Lab. IIIb in the 12-session training period provided in the experiment. Their progress in reading had slowed down and they were unable to advance beyond the IIIb laboratory level.

The SRA is designed to be used over an extended period and one could argue that some low-status learners required more than 12 sessions to benefit fully from the programme. Nevertheless it is felt that 12 sessions of training with the SRA were sufficient for the purpose of this experiment.

5.4.2 THE COGNITIVE TRAINING PROGRAMME

Twelve units were quite insufficient for a comprehensive cognitive training programme: instruction was confined to a limited range of cognitive skills (e.g. comparison and contrast could have been explored over a longer period); time for practice in some skills was limited (e.g. eliciting metaphorical meanings from a text); time for linguistic skills acquisition was also too short: error analysis and remediation was brief and sometimes superficial; phonological, morphological and semantic meanings were practised in one unit only. In short, the content of the programme could be infinitely expanded for optimal effect. Priorities had necessarily to be determined and it was felt that 12 sessions were sufficient to establish the principles of the cognitive strategy.

5.5 DISCUSSION OF THE EXPERIMENTAL DESIGN AND ITS LIMITATIONS

5.5.1 SAMPLE POPULATION

The size of the sample population was small and limited the generalizability of the conclusions. The investigation should be undertaken on a wider scale (e.g. to include other teachers' colleges).

5.5.2 THE SEQUENCE OF ALTERNATING STRATEGIES

Two treatments in sequence for the same student introduced a third variable difficult to control, i.e. the interference effect of two treatments in reversed sequence. Unless very large numbers of subjects are used, sequencing the order of treatments is only partially effective since instruction in one strategy may have either positive or negative residual effects on another strategy.

5.5.3 LONG-TERM INSTRUCTIONAL EFFECTS

The effects of the two instructional treatments on long-term memory were interesting. Over time, the low-status students also benefitted from a cognitive reading comprehension instructional strategy. They required a longer period for linguistic maturation before they could benefit from instruction, acquaint themselves with unfamiliar concepts and adjust to the requirements for independent study at the college. This suggests that instruction should be extended over a considerable period.

5.6 LINKS BETWEEN RESULTS AND PREVIOUS LITERATURE SEARCH

The results confirm the views of Kavale and Schreiner (1979), Oakhill (1984), and Holmes (1985) that an important distinction between low-progress and high-progress learners is inferencing ability. (See Graphs A and C). However, not enough research has been done on the long-term effects of instruction on low-progress learners.

Low-status EL2 learners employ error avoidance strategies (Brown, 1980: 88-89). (Also see Discussion of Findings, 5.2) This accounts for the fact that the low-status students were low risk-takers and preferred to ask literal questions which required merely verbatim answers.

This has serious consequences for any communicative language learning programme, which requires confident, high risk-taking EL2 primary school teachers.

The improvement in the inferential reading comprehension scores of Group 1 subjects confirms Burley's (1985) conclusion that metacognitive reading skills should be taught directly.

Inferential skills can be developed (Graph A). This supports the views of McIntosh (1985: 755), Carr (1983: 518) and Escoe (1984: 226) but refutes Hansen and Pearson's (1983) conclusion that good readers don't benefit much by training in inference.

There are many controversial issues in reading research. Many fruitful areas have yet to be explored: for example, the exact nature and extent of the EL2 learner's error avoidance strategies.

5.7 IMPLICATIONS OF THE FINDINGS

5.7.1 FOR LEARNING THEORY IN GENERAL

Behaviourist learning theory appears to have less explanatory power than that of cognitive theory. Piaget's theories of cognitive development, Gagné's theory of subordinate and superordinate learning skills, and Vygotsky's view of the relationship between thought and language acquire added support (See Chapter I)

5.7.2 FOR MODELS OF READING COMPREHENSION IN PARTICULAR

Cognitive-affective and cognitive-linguistic models of reading comprehension have greater explanatory power than programmed reading schemes but require refinement. The SRA,

for example, develops literal more effectively than inferential reading skills.

5.7.3 FOR READING COMPREHENSION PRACTICE

Kitching's (1984) concern about the general proficiency in English of Afrikaans-speaking primary school teacher trainees has been confirmed by this study, which also highlights some of the problems specifically related to the students' proficiency in reading comprehension. The programme developed for this study outlines strategies which do seem to promote the student's thinking skills through direct instruction in self-generated inferential reading comprehension questions. The Cape Education Department, serving teachers, school principals, parents and college lecturers could note these research findings, and implement the recommendations where feasible. Self-generated question-and-answer strategies might profitably be employed alongside traditional ones. This study also suggests that self-generated inferential questions appear to have validity as measures of reading ability. There is a place for programmed reading instruction, but high-status learners need open-ended cognitive reading comprehension programmes. It has been shown that the SRA does not promote inferential reading comprehension.

Low-status EL2 college students appear to need both cognitive and programmed reading instruction. Their linguistic skills should be improved if they are to teach English successfully: both Kitching's and this work indicate that a pass of 33 1/3% in Senior Certificate EL2 by no means automatically qualifies all students to cope with the EL2 college course. The intimate relationship between general language proficiency and reading comprehension skills also emerges from this study. Stricter selection criteria in respect of competence in English may well have to be applied by the selection committee of the Cape Education Department.

Bridging courses at colleges only partially solve the problem of the student's improficiency in English. Finally, there is an urgent need for in-service teacher training programmes on the setting of reading comprehension tests for EL2 Stds 3-5 pupils if we are to raise the standard of reading in the primary school.

CHAPTER 6

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The conclusions and recommendations that follow will focus on five facets of the investigation: reading comprehension instruction in the primary school, EL2 assessment procedures at colleges of education, the rôle of the SRA in reading instruction, taxonomies of reading comprehension subskills for teacher training and in-service reading comprehension instructional programmes.

6.2 READING COMPREHENSION INSTRUCTION IN THE PRIMARY SCHOOL

Sixty-eight per cent of the respondents in Schoeman's (1984) study claimed that they were not adequately trained in reading comprehension skills at college or university. The overemphasis on literal skills in primary school reading comprehension test papers confirms their claim. It is clear that inferential (thinking) reading skills are neglected. It was for these reasons that the author designed a cognitive reading comprehension programme for use in colleges of education. Developing the reading proficiency of EL2 students can no longer take place on an ad hoc basis. Since reading skills are developed over a life-time, cognitive reading development programmes should be implemented at primary, secondary and tertiary levels for optimal effect. It is axiomatic that the quality of education provided by the primary school depends on the quality and nature of training at tertiary institutions. The communicative competence as well as the reading skills of EL2 teachers must be beyond reproach. Teacher trainees should realize that word study and "word attack" skills, essential as they are, constitute only the first steps in instruction in genuine reading comprehension.

6.3. EL2 ASSESSMENT PROCEDURES AT COLLEGES OF EDUCATION

At present the system of assessing the EL2 proficiency of teacher trainees at colleges is inadequate because the students are merely given a blanket mark for English which appears as a symbol on their teachers' diplomas. Such a symbol is virtually meaningless as it is not accompanied by a description of the student's proficiency in the various language skills. A language skills approach is required. What Carroll (1980) has done with regard to testing communicative performance could be done for reading skills assessment. Criterion-referenced scales like those designed by Carroll for oral and written communication assessment could be created for reading comprehension assessment as well.

Only skilled teachers able to interpret not merely surface but also deep, implied meanings can implement the communicative language learning programmes in vogue at present. Should low-status students who merely glean facts from textual material and fail to extract deeper levels of meaning be made responsible for EL2 teaching? Such students are easily identified by the time they have to apply for teaching posts. On the other hand there are high-status, communicatively competent EL2 students at colleges who do read proficiently. They can be identified and should be made responsible for EL2 teaching. The low-status EL2 teacher trainees are also usually low risk-takers who are bound by the class textbook or prepackaged reading schemes designed to minimize teacher error. School principals should know the strengths and weaknesses of prospective teachers so that they may allocate teaching tasks appropriately. It is incumbent upon the responsible officials of the provincial education departments to initiate and direct steps in this regard.

6.4 THE RÔLE OF THE SRA IN READING INSTRUCTION

Despite the claims of its designers, the SRA is shown to have limitations: it does not develop inferential reading comprehension skills. It seems best suited to developing the literal skills of low-progress learners. High-progress learners soon complain of boredom. Of course, low-progress learners also need instruction in cognitive reading skills. However, they require a longer time for linguistic maturation before they benefit from cognitive reading instructional strategies.

6.5 TAXONOMIES OF READING COMPREHENSION SUBSKILLS

Taxonomies of reading comprehension subskills like those of Lunzer and Gardner (1979) should be adapted and expanded to include semantic, morphological and phonological meanings if they are to serve the specific needs of teachers in training. These aspects of language are, in themselves, wide fields of study which are equally relevant to reading comprehension developmental programmes.

6.6 IN-SERVICE READING COMPREHENSION INSTRUCTIONAL PROGRAMMES

The present study has demonstrated that students have increased their linguistic skills, developed their reading comprehension, and enhanced their understanding of English. The author believes that such an intensive application of the whole process of reading comprehension was responsible for enriching the students' understanding and use of their second language.

The implications of this study are that the author's reading comprehension development programme has beneficial effects for both teacher and learners, especially in second language instruction. Education Departments might therefore be

persuaded by this empirical study to implement such programmes in the school system, but this would require in-service teacher education on a large scale. College lecturers could be seconded by the various provincial education departments to undertake this task.

6.7 CONCLUSION

One of the broader aims of education is to develop critical readers who are capable of independently judging all written information that affects the quality of their lives. They also need to be trained to recognize and evaluate all forms of disinformation which aim to deceive the gullible. Disraeli said that "No government can be long secure without a formidable opposition." Neither can civilized values without discriminating, critical readers.

6.8 SUGGESTIONS FOR FURTHER RESEARCH

Suggested areas for further research might be:-

1. Measures of readability suitable for use with Afrikaans-speaking EL2 learners in the Republic of South Africa: the development and refinement of readability measures for EL2 research in the RSA.
2. Error avoidance strategies in the written work of English Second Language Afrikaans-speaking teacher trainees: their frequency, scope, character and apparent causes and effects. The significance of error avoidance for the acquisition of such students' linguistic competence in English; language learning programmes that enhance the student's confidence and reduce his fear of error.
3. The certification of Afrikaans-speaking EL2 teacher trainees: a criterion-referenced test of reading

comprehension subskills for Afrikaans-speaking EL2 college students.

4. An investigation into the EL2 reading comprehension development programmes employed at present at colleges of education in the RSA.
5. The development and refinement of cognitive EL2 reading comprehension programmes for use in (a) primary schools (b) high schools and (c) teachers' colleges in the RSA.
6. Teaching, testing and assessing the reading comprehension skills of EL2 primary school pupils in the RSA: an investigation into present practice.

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APPENDICES IA, IB AND IC

SAMPLE STUDENTS' SCRIPTS

1. High-Status Subject No. 7
2. High-Status Subject No. 39
3. Low-Status Subject No. 19

NOTE THAT THE LANGUAGE AND OTHER ERRORS IN THE SAMPLE SCRIPTS ARE THOSE MADE BY THE STUDENTS TESTED.

READING COMPREHENSION

PRE-TEST JANUARY 1987

SUBJECT NO. 7

LITERAL QUESTIONS/ANSWERS

Question 1: Why do psychologists "help" women in the supermarkets?

Answer: Women are always buying articles they do not really need.

Question 2: Why did Gerald Stahl said that food packers had to put more hypnosis into their package designs?

Answer: More housewives would take those products rather than just ordinary ones.

Question 3: What has no effect on the modern woman?

Answer: A plain box with just the name and marker of the product is too simple.

Question 4: What is the explanation of one package designer for the fact that women are so susceptible to red?

Answer: He said that most women leave their glasses at home and therefore a package had to be a bright colour so that the women can noticed it.

Question 5: How were the modern markets, in the mid-fifties, laid out?

Answer: They put it so that the most expensive products would be seen first.

INFERENCEAL QUESTIONS

Question 1: Why do you think people do not like to buy the last pack of a product?

Answer: Almost everybody think that their is something wrong with that last pack otherwise it would have been sold already.

Question 2: What is the main reason for the boothes where food can be seen and savoured?

Answer: The shop's profit depends on how many products he can sell and therefore he would do anything to sell more products.

Question 3: Do you think that women are always looking at the colour and pictures on a product?

Answer: No, nine out of ten women are certainly looking at the price too.

Question 4: Why do you think Gerald Stahl told the food packers to put more hypnosis into their package designs?

Answer: In this way the shopper would buy more things and this is how the shops get their profits.

Question 5: Do you think that help from the psychiatrists really persuade the woman to buy less articles?

Answer: No, because the food packers began designing hypnoticing designs and the women immediately buy a lot of unnessary articles again.

READING COMPREHENSION

PRE-TEST JANUARY 1987

SUBJECT NO. 39

LITERAL QUESTIONS/ANSWERS

Question 1: What did Gerald Stahl vice-president of the Package Designers Council, urge food packers to do?

Answer: He urged food packers to put more hypnosis into their package designs.

Question 2: Which colours help to create hypnotic effects?

Answer: The colours are red and yellow.

Question 3: According to Mr Stahl how long does it take a women to cover an aisle in the market if she doesn't tarry?

Answer: It takes her 20 seconds.

Question 4: Why are women so susceptible to red packages?

Answer: One package designer conduces that most woman shoppers leave their glasses at home or will not wear them in public if they can avoid it.

Question 5: What is the persentage that indicates that shoppers buy more if the shelves are kept full?

Answer: 22 per cent indicates that shoppers buy more if the shelves are kept full.

INFERENCEAL QUESTIONS

Question 1: Do you think psychologists play a positive part in the field of supermark sales? Motivate your answer.

Answer: My opinion on the above statement is negative. I don't think they play a positive part because they try to persuade women to buy items they don't really need.

Question 2: Why does some packages attract people more than others?

Answer: The colour of the packages plays a great part. Brighter colours would attract more people than the fader colours. Bigger print would also attract more people.

Question 3: Why does nobody ever take the last can on a shelve?

Answer: I think it is only psychological. They think there might be something wrong with it, if it is the last can left.

Question 4: Do you agree that things like colour, shelf position and form of the products plays a great part in supermarket sale?

Answer: It does play a part but only to a small extense. I think cheap prices attracts people much more.

Question 5: What "help" does woman shoppers get in supermarkets?

Answer: Psychologists are their to advice and assist them on buying the correct products.

READING COMPREHENSION

PRE-TEST JANUARY 1987

SUBJECT NO. 19

LITERAL QUESTIONS/ANSWERS

Question 1: Who was the young man who printed a remark in "The New York Times"?

Answer: It was Gerald Stahl, vice-president of the Package Designes Council.

Question 2: What was his message to the food packers?

Answer: Gerald Stahl said to them to put more hypnosis in their package designs.

Question 3: What did the designes used to let the woman reach out for the package?

Answer: The designes used "symbols that have a dream like quality".

Question 4: How did the designes manage a box to talk?

Answer: They put the talk on a strip that broadcast when a shopper's fingers rubs it.

Question 5: What did a Food Manager say about selling prodaks?

Answer: He said that people buy more cans of food when the shelves were kept full.

INFERENTIAL QUESTIONS

Question 1: Why is just the putting of a name and maker of the products on the box not enough?

Answer: The woman wants something for her eyes on the box. Something that will make her wanting to eat that product.

Question 2: Why will the talking box stress the brand name?

Answer: It will happened because the talking sounds will have more attraction than the name.

Question 3: Why does people prevere to buy products that there are many of on the shells.

Answer: It happened because when there were many of a spesific product, it attract our attension and that products are most of the time newer, fresher, than the others.

Question 4: Why does people buy things they does not really need?

Answer: They buy it because it get there attension and they want to try it.

Question 5: Why does housewifes not take longer to buy products.

Answer: There time are to short to hang orund looking at everything.

SAMPLE SCORE SHEET: LITERAL & INFERENTIAL QUESTIONS/ANSWERS

SUBJECT NO: -----

QUESTION/ ANSWER	SCORE 1	SCORE 2	SCORE 3	SCORE 4
	Language	Distinction between Literal and Inferential	Relation of answer to question?	
			Literal	Inferen- tial
1. 2. 3. LITERAL 4. 5.				X
SUBTOTAL	20	10		
1. 2. 3. INFERENTIAL 4. 5.			X	
SUBTOTAL	20	10		
TOTAL	40	20	10	10

APPENDIX III

SCORING AND MARKING:

Pilot test of literal and inferential student-generated reading comprehension questions and answers.

Scores awarded by the investigator and the moderator : pre-test taken by sample of English Second Language college students in their second year of training.

APPENDIX III : SCORING AND MARKING

PILOT TEST : SCORING BY AUTHOR AND MODERATOR OF PRE-TEST TAKEN
BY EL₂ SECOND-YEAR STUDENTS.

TES - TEE	LANGUAGE		DISTINCTION BETWEEN LITE- RAL & INFER- ENTIAL		CORRECTNESS OF LITERAL QUES- TIONS/ANSWERS		CORRECTNESS OF INFERENTIAL QUESTIONS/ ANSWERS	
	SCORE 1		SCORE 2		SCORE 3(a)		SCORE 3(b)	
	Exa- miner	Mode- rator	Exa- miner	Mode- rator	Exa- miner	Mode- rator	Exa- miner	Mode- rator
No.1	12 40	14 40	19 20	18 20	8 10	8 10	7 10	6 10
No.2	21 40	22 40	16 20	16 20	7 10	7 10	7 10	8 10
No.3	27 40	27 40	11 20	11 20	9 10	8 10	3 10	3 10
No.4	21 40	18 40	15 20	16 20	10 10	10 10	6 10	6 10
No.5	13 40	15 40	14 20	14 20	10 10	10 10	6 10	6 10
No.6	23 40	21 40	13 20	15 20	8 10	7 10	5 10	5 10
No.7*	19 40	20 40	10 14	10 14	7 8	8 8	2 6	1 6
No.8	21 40	20 40	17 20	18 20	9 10	10 10	7 10	8 10
No.9	26 40	26 40	18 20	19 20	10 10	10 10	9 10	8 10

* incomplete test. (Subject failed to complete the test)

(Excluding Subject No. 7) Average Scores of Examiner & Moderator:

	<u>Examiner</u>	<u>Moderator</u>
Score 1	: 20,5	20,4
Score 2	: 15,4	15,9
Score 3(a)	: 8,9	8,8
Score 3(b)	: 6,3	6,3

APPENDIX IV

RAW DATA

PRE-TEST RESULTS

JANUARY 1987

APPENDIX IV

RAW DATA

PRE-TEST RESULTS

JANUARY 1987

PRETEST (PASSAGE "A") A test of literal and inferential reading comprehension questions:- student generated questions and answers.												
Rank Order: Hi - Lo - Status	Language Score			Does subject distinguish between literal & inferential questions/ answers?			Is answer correctly related to the question?			No. of the subject	N = 52 Sequence of strategy employed	
	(i)Literal	(ii)Inferential	(iii)Total	(i) Literal	(ii) Inferential	(iii)Total	(a)as regards literal questions?	(b)as regards inferential questions?	Total			
Total	100	20	20	40	10	10	20	Literal	10	Inferential	10	
Score	80	10	9	19	10	10	20		10		6	5 Cognitive Strategy 1st
*78	8	11	19	10	9	19			9		4	37 SRA Strat. 1st
77	10	2	12	10	10	20		7		6	30	SRA 1st
72	3 7	2 2	5 9	10 10	8 8	18 18		8 7		3 2	35	SRA 1st
72	10	2	12	10	2	12		6		0	52	Cog.1st
72	1 1	8 6	9 7	10 10	5 10	15 20		7 5		6 6	47	Cog.1st
71	18	15	33	10	6	16		7		2	24	Cog.1st
71	17 18	3 6	20 24	10 10	7 9	17 19		9 9		5 5	39	SRA 1st
69	17	1	18	10	10	20		8		6	26	Cog.1st
69	5 7	9 9	14 15	10 10	2 0	12 10		8 7		2 0	51	Cog.1st
68	16	2	18	10	5	15		10		5	34	Cog.1st
67	13	6	19	10	8	18		7		6	48	Cog.1st
67	11 12	6 11	17 23	10 9	6 8	16 17		7 9		6 7	7	SRA 1st
66	19	8	27	10	10	20		9		3	28	Cog.1st
66	4	0	4	10	10	20		9		8	44	Cog.1st
65	12 11	1 3	13 14	10 10	6 6	16 16		9 9		3 4	31	Cog.1st

APPENDIX IV (Cont)

Rank Order: Hi - Lo Status	Language Score			Does subject distinguish between literal & inferential questions/answers?			Is answer correctly related to the question?			No. of the subject	N = 52 Sequence of Strategy Employed	
	(i) Literal	(ii) Inferential	(iii) Total	(i) Literal	(ii) Inferential	(iii) Total	(a) As regards literal questions?	(b) As regards Inferential questions?				
Total	20	20	40	10	10	20	Literal	10	Inferential	10		
65	2	5	7	10	8	18		10		7	38	Cog. 1st
64	10	13	23	10	10	20		10		8	40	SRA 1st
63	18 20	4 9	22 29	10 10	9 10	19 20		9 9		8 7	27	SRA 1st
62	12	12	24	10	8	18		10		5	9	Cog. 1st
61	10	5	15	10	10	20		9		7	16	SRA 1st
61	12	2	14	10	6	16		10		4	1	SRA 1st
61	11	0	11	10	8	18		8		5	20	SRA 1st
59	1 1	1 0	2 1	10 10	6 10	16 20		7 8		6 6	15	SRA 1st
59	12	4	16	10	10	20		9		8	42	SRA 1st
58	6	2	8	10	10	20		10		6	2	Cog. 1st
57	11	0	11	10	8	18		9		4	21	SRA 1st
56	9 7	3 3	12 10	10 10	5 6	15 16		8 7		3 4	43	Cog. 1st
55	12	12	24	10	10	20		10		4	12	Cog. 1st
55	12	8	20	10	10	20		10		8	32	SRA 1st
55	2	0	2	10	10	20		2		9	18	Cog. 1st
54	12 9	5 6	17 15	10 10	9 10	19 20		9 9		9 9	3	SRA 1st
54	14	14	28	10	6	16		10		6	4	SRA 1st
54	10	11	21	10	5	15		9		4	50	Cog. 1st
53	2	7	9	10	6	16		6		6	33	SRA 1st
51	15	2	17	10	5	15		10		5	17	Cog. 1st
51	10	0	10	10	10	20		10		7	6	SRA 1st
51	8 8	1 1	9 9	10 10	2 2	12 12		8 8		0 1	23	SRA 1st
50	12	0	12	10	10	20		7		9	13	SRA 1st
50	16	9	25	10	10	20		8		5	25	SRA 1st
48	14	6	20	10	6	16		9		4	45	SRA 1st
46	0	4	4	10	4	14		7		3	41	Cog. 1st

contd/.....

APPENDIX IV (cont)

Rank Order: Hi - Lo Status	Language Score			Does subject distinguish between literal & inferential questions/answers?			Is answer correctly related to the question?				No. of subject	N = 52 Sequence of Strategy Employed	
	(i) Literal	(ii) Inferential	(iii) Total	(i) Literal	(ii) Inferential	(iii) Total	(a) as regards literal questions?		(b) as regards inferential questions?				
Total	100	20	20	40	10	10	20	Literal	10	Infer-	10		
Score													
.44	11	4	15	10	6	16		7			2	36	SRA 1st
43	2 4	4 4	6 8	10 10	4 6	14 16		7 6			4 4	11	Cog.1st
41	12	1	13	10	10	20		5			4	10	Cog.1st
41	16	1	17	10	9	19		8			2	22	SRA 1st
40	8	0	8	10	6	16		8			4	46	Cog.1st
.39	14	6	20	10	8	18		5			4	14	SRA 1st
37	12	0	12	10	6	16		10			2	29	Cog.1st
36	6 7	0 0	6 7	10 10	8 10	18 20		7 7			3 2	19	Cog.1st
35	2	0	2	8	10	18		3			1	8	Cog.1st
34	9	5	14	10	2	12		6			0	49	SRA 1st

* Moderator's scores are above the examiner's scores

Hi-status: N = 23; Lo-status N = 29	
Hi-status (N=23)	→ 13 Cognitive strategy first → 10 SRA strategy first
Lo-status (N=29)	→ 13 Cognitive strategy first → 16 SRA strategy first

APPENDIX IV

RAW DATA

MID-TERM POST-TEST RESULTS

MAY 1987

APPENDIX IV

RAW DATA

MID-TERM POST-TEST RESULTS

MAY 1987

MID-TERM POST-TEST (PASSAGE "B"): A test of literal and inferential reading comprehension questions:- student generated questions and answers													
Rank Order: Hi - Lo - Status	Language Score			Does subject distinguish between literal & inferential questions/ answers?			Is answer correctly related to the question?				No. of the subject	N = 52 Mid-term post-test (after 12 sessions)	
	(i) Literal	(ii) Inferential	(iii) Total	(i) Literal	(ii) Inferential	(iii) Total	(a) As regards literal questions?		(b) As regards inferential questions?				
Total	100	20	20	40	10	10	20	Literal	10	Inferential	10		
	80	9	6	15	10	10	20		10		7	5	Cognitive Strategy First
	78	10	9	19	10	10	20		7		5	37	SRA Strategy First
	77	15	4	19	10	8	18		8		2	30	SRA
	72	6	6	12	10	10	20		9		6	35	SRA
	72	8	5	13	10	10	20		8		5		
	72	7	0	7	10	10	20		6		5	52	Cognitive
	72	12	3	15	6	9	15		5		6	47	Cognitive
	72	10	5	15	10	10	20		5		7		
	71	18	12	30	10	10	20		7		6	24	Cognitive
	71	11	10	21	10	9	19		8		4	39	SRA
	71	11	8	19	10	10	20		8		7		
	69	19	7	26	10	8	18		10		6	26	Cognitive
	69	13	4	17	10	10	20		10		8	51	Cognitive
	69	14	4	18	10	10	20		9		8		
	68	7	6	13	10	6	16		7		4	34	Cognitive
	67	14	9	23	10	10	20		8		6	48	Cognitive
	67	6	5	11	10	10	20		8		8	7	SRA
	67	6	3	9	10	10	20		8		8		
	66	4	6	10	10	10	20		7		5	28	Cognitive
	66	11	4	15	10	8	18		8		4	44	Cognitive

APPENDIX IV (Cont)

Rank Order: Hi - Lo Status	Language Score			Does subject distinguish between literal & inferential questions/answers?			Is answer correctly related to the question?				No. of the subject	N = 52 Mid-term post-test (after 12 sessions)
	(i)Literal	(ii)Inferential	(iii)Total	(i) Literal	(ii) Inferential	(iii)Total	(a)As regards literal questions?		(b)As regards Inferential questions?			
Total	20	20	40	10	10	20	Literal	10	Infe- rential	10		
65	3 5	0 0	3 5	10 10	2 4	12 14		8 9		1 1	31	Cognitive
65	12	6	18	10	10	20		10		5	38	Cognitive
64	11	11	22	10	8	18		8		8	40	SRA
63	10 10	7 8	17 18	10 10	4 4	14 14		8 7		2 2	27	SRA
62	6	3	9	6	10	16		2		6	9	Cognitive
61	5	0	5	8	8	16		7		4	16	SRA
61	5	0	5	10	10	20		8		5	1	SRA
61	3	4	7	10	6	16		7		1	20	SRA
59	9 9	1 0	10 9	8 10	4 8	12 18		7 8		1 1	15	SRA
59	13	2	15	10	10	20		8		9	42	SRA
58	8	0	8	10	8	18		8		5	2	Cognitive
57	6	2	8	10	6	16		7		2	21	SRA
56	2 3	0 0	2 3	9 10	2 8	11 18		6 3		2 2	43	Cognitive
55	9	5	14	10	3	13		9		3	12	Cognitive
55	9	6	15	10	2	12		7		0	32	SRA
55	4	1	5	10	10	20		4		2	18	Cognitive
54	9 11	1 2	10 13	10 10	8 10	18 20		10 10		5 5	3	SRA
54	14	2	16	10	10	20		7		6	4	SRA
54	12	2	14	10	6	16		9		3	50	Cognitive
53	0	3	3	10	8	18		6		4	33	SRA
51	10	1	11	10	10	20		7		3	17	Cognitive
51	2	0	2	10	10	20		6		7	6	SRA

APPENDIX IV (Cont)

Rank Order: Hi - Lo Status	Language Score			Does subject distinguish between literal & inferential questions/answers?			Is answer correctly related to the question?			No. of the subject	N = 52 Sequence of Strategy Employed	
	(i) Literal	(ii) Inferential	(iii) Total	(i) Literal	(ii) Inferential	(iii) Total	(a) As regards literal questions?	(b) As regards Inferential questions?				
Total	100	20	20	40	10	10	20	Literal	10	Inferential	10	
51	1	0	1	8	8	16		6		5	23	SRA
	1	1	2	8	10	18		6		5		
50	10	2	12	10	8	18		7		5	13	SRA
50	14	8	22	10	4	14		9		2	25	SRA
48	9	3	12	8	8	16		8		5	45	SRA
46	3	0	3	8	8	16		4		5	41	Cognitive
44	2	4	6	10	6	16		4		2	36	SRA
43	11	2	13	10	7	17		10		6	11	Cognitive
	11	4	15	10	10	20		8		8		
41	11	0	11	10	6	16		5		2	10	Cognitive
41	10	4	14	10	10	20		10		4	22	SRA
40	11	8	19	10	6	16		4		4	46	Cognitive
39	8	4	12	10	10	20		5		0	14	SRA
37	14	5	19	10	2	12		9		0	29	Cognitive
36	8	3	11	8	5	13		6		5	19	Cognitive
	8	5	13	10	10	20		7		3		
35	0	0	0	6	2	8		3		1	8	Cognitive
34	4	6	10	10	4	14		9		3	49	SRA

Moderator's scores are above the examiner's scores.

APPENDIX IV

RAW DATA

TERMINAL POST-TEST RESULTS

SEPTEMBER 1987

APPENDIX IV

RAW DATA

TERMINAL POST-TEST (PASSAGE "C")

SEPTEMBER 1987

TERMINAL POST-TEST (PASSAGE "C"): A test of literal and inferential reading comprehension questions: student-generated questions and answers.												
Rank Order: Hi - Lo - Status	Language Score			Does subject distinguish between literal & Inferential questions/answers?			Is answer correctly related to the question?				No. of the subject.	N = 52 Terminal Post-test (after 24 sessions)
	(i) Literal	(ii) Inferential	(iii) Total	(i) Literal	(ii) Inferential	(iii) Total	(a) As regards literal questions?		(b) As regards Inferential questions?			
Total							Literal		Inferential			
100	20	20	40	10	10	20		10		10		
80	12	6	18	10	10	20		9		7	5	Cognitive Strategy First
78	11	4	15	8	10	18		6		6	37	SRA Strategy First
77	7	2	9	2	10	12		2		8	30	SRA
72	5	2	7	8	8	16		7		7	35	SRA
72	5	2	7	10	8	18		6		8		
72	4	1	5	7	10	17		3		5	52	Cognitive
72	11	2	13	10	10	20		7		6	47	Cognitive
72	15	2	17	10	10	20		7		4		
71	8	0	8	10	10	20		7		5	24	Cognitive
71	5	0	5	6	10	16		6		5	39	SRA
71	7	4	11	5	10	15		5		7		
69	19	7	26	10	10	20		9		8	26	Cognitive
69	10	1	11	7	7	14		7		6	51	Cognitive
69	11	1	12	6	8	14		5		5		
68	12	2	14	10	8	18		8		5	34	Cognitive
67	6	3	9	10	10	20		9		5	48	Cognitive
67	9	2	11	7	10	17		5		7	7	SRA
67	7	4	11	10	10	20		6		7		
66	1	5	6	9	10	19		7		6	28	Cognitive
66	7	0	7	10	10	20		6		7	44	Cognitive
65	9	0	9	10	8	18		8		3	31	Cognitive
65	9	0	9	10	8	18		7		4		

Contd/.....

APPENDIX IV (Cont)

Rank Order: Hi - Lo Status	Language Score			Does subject distinguish between literal & inferential questions/answers?			Is answer correctly related to the question?				No. of the subject	N = 52 Terminal Post-test (after 24 sessions)
	(i) Literal	(ii) Inferential	(iii) Total	(i) Literal	(ii) Inferential	(iii) Total	(a) As regards literal questions?	(b) As regards inferential questions?				
Total	20	20	40	10	10	20	Literal	10	Inferential	10		
65	11	2	13	7	10	17		5		7	38	Cognitive
64	7	5	12	3	9	12		3		8	40	SRA
63	9	2	11	6	6	12		6		2	27	SRA
	11	5	16	6	6	12		5		2		
62	7	0	7	4	10	14		1		5	9	Cognitive
61	5	3	8	2	10	12		2		6	16	SRA
61	4	3	7	8	10	18		8		3	1	SRA
61	1	2	3	8	10	18		6		3	20	SRA
59	10	0	10	10	8	18		7		1	15	SRA
	11	0	11	10	6	16		6		1		
59	1	0	1	8	10	18		8		6	42	SRA
58	8	4	12	8	10	18		7		6	2	Cognitive
57	10	0	10	10	10	20		9		6	21	SRA
56	11	0	11	8	8	16		8		2	43	Cognitive
	13	1	14	10	7	17		7		4		
55	14	9	23	10	9	19		8		2	12	Cognitive
55	9	1	10	8	10	18		5		7	32	SRA
55	4	0	4	10	10	20		10		5	18	Cognitive
54	5	0	5	10	7	17		10		5	3	SRA
	5	0	5	10	8	18		9		8		
54	18	8	26	10	8	18		8		5	4	SRA
54	10	4	14	10	10	20		8		10	50	Cognitive
53	10	10	20	10	10	20		5		8	33	SRA
51	14	5	19	10	10	20		9		3	17	Cognitive
51	6	0	6	10	8	18		6		5	6	SRA
51	3	0	3	6	10	16		3		5	23	SRA
	4	0	4	8	10	18		2		5		
50	11	1	12	10	8	18		7		4	13	SRA
50	16	9	25	8	8	16		6		5	25	SRA
48	9	7	16	10	10	20		9		7	45	SRA
46	7	0	7	6	10	16		6		3	41	Cognitive
44	11	0	11	10	10	20		7		4	36	SRA
43	5	0	5	7	10	17		5		4	11	Cognitive
	7	1	8	8	10	18		3		3		

Contd/.....

APPENDIX IV (Cont)

Rank Order: Hi - Lo Status	Language Score			Does subject distinguish between literal & inferential questions/answers?			Is answer correctly related to the question?				No. of the subject	N = 52 Terminal Post-test (after 24 sessions)
	(i) Literal	(ii) Inferential	(iii) Total	(i) Literal	(ii) Inferential	(iii) Total	(a)As regards literal questions?		(b)As regards inferential questions?			
Total	20	20	40	10	10	20	Literal	10	Inferential	10		
100	20	20	40	10	10	20	Literal	10	Inferential	10		
41	7	0	7	8	10	18		4		4	10	Cognitive
41	8	3	11	10	8	18		7		3	22	SRA
40	4	0	4	10	10	20		8		7	46	Cognitive
39	9	4	13	8	10	18		6		4	14	SRA
37	5	4	9	9	10	19		7		0	29	Cognitive
36	0	0	0	10	8	18		8		0	19	Cognitive
36	0	0	0	10	8	18		8		1	19	Cognitive
35	8	1	9	10	8	18		7		3	8	Cognitive
34	4	0	4	9	8	17		9		5	49	SRA

Moderator's scores are above the examiner's scores.

APPENDIX IV

RAW DATA

TERMINAL POST-TEST REPEATED - 12 MONTHS AFTERWARDS

SEPTEMBER 1988

APPENDIX IV

RAW DATA

TERMINAL POST-TEST RESULTS

SEPTEMBER 1988

TERMINAL POST-TEST REPEATED - 12 MONTHS AFTERWARDS, SEPTEMBER 1988

A test of literal and inferential reading comprehension questions:-
student generated questions and answers.

Rank Order: Hi - Lo - Status	Language Score			Does subject distinguish between literal & inferential questions/answers?			Is answer correctly related to the question?			No. of the subject	N = 49 Sequence of strategy employed
	(i) Literal	(ii) Inferential	(iii) Total	(i) Literal	(ii) Inferential	(iii) Total	(a) as regards literal question?	(b) as regards inferential questions?			
Total	20	20	40	10	10	20	Literal	Inferential	10		
Score											
80	5	5	10	10	7	17		10	7	5	Hi-status Cognitive
78	0	3	3	6	10	16		0	2	37	SRA
77	5	0	5	8	10	18		3	6	30	SRA
72	10	2	12	8	10	18		8	6	35	SRA
	6	3	9	8	10	18		6	5		
72	5	9	14	10	10	20		8	6	52	Cognitive
72	11	9	20	10	8	18		8	3	47	Cognitive
	11	8	19	10	10	20		9	3		
71	10	16	26	10	10	20		7	7	24	Cognitive
71	3	0	3	10	9	19		10	8	39	SRA
	2	0	2	10	10	20		10	6		
69	12	4	16	10	10	20		9	8	26	Cognitive
69	8	4	12	10	8	18		8	5	51	Cognitive
	6	0	6	10	10	20		9	4		
68	13	12	25	10	10	20		8	3	34	Cognitive
67	16	2	18	8	5	13		5	3	7	SRA
	16	2	18	10	10	20		5	3		
66	3	10	13	10	8	18		9	6	28	Cognitive
66	14	5	19	10	10	20		9	4	44	Cognitive
65	5	1	6	9	10	19		6	3	31	Cognitive
	3	3	6	10	10	20		7	2		
65	17	7	24	10	10	20		10	6	38	Cognitive
64	15	8	23	10	10	20		8	9	40	SRA
63	13	2	15	10	10	20		9	6	27	SRA
	14	3	17	10	10	20		10	5		
62	5	0	5	6	8	14		4	5	9	Cognitive

APPENDIX IV (CONT)

Rank Order: Hi - Lo - Status	Language Score			Does subject distinguish between literal & inferential questions/answers?			Is answer correctly related to the question?				No. of the subject	N = 49 Sequence of Strategy Employed
	(i) Literal	(ii) Inferential	(iii) Total	(i) Literal	(ii) Inferential	(iii) Total	(a) As regards literal questions?	(b) As regards inferential questions?				
Total	20	20	40	10	10	20	Literal	10	Inferential	10		
100	20	20	40	10	10	20						
61	15	5	20	10	10	20		7		5	16	SRA
61	3	0	3	10	10	20		6		9	20	SRA
59	10	0	10	8	8	16		8		6	15	Lo-status SRA
59	8	0	8	10	10	20		8		4	42	SRA
59	10	0	10	10	10	20		8		9	42	SRA
58	10	4	14	10	8	18		7		8	2	Cognitive
57	13	1	14	10	10	20		8		5	21	SRA
56	4	0	4	10	8	18		7		5	43	Cognitive
56	5	0	5	10	8	18		7		4	43	Cognitive
55	16	2	18	10	10	20		10		6	12	Cognitive
55	7	1	8	10	10	20		8		10	32	SRA
55	0	3	3	8	10	18		8		6	18	Cognitive
54	6	4	10	10	8	18		8		7	3	SRA
54	6	5	11	10	8	18		7		6	3	SRA
54	19	9	28	10	6	16		9		6	4	SRA
54	10	2	12	10	10	20		9		8	50	Cognitive
53	9	1	10	10	8	18		6		7	33	SRA
51	16	0	16	10	7	17		10		3	17	Cognitive
51	2	0	2	10	8	18		8		4	23	SRA
51	2	3	5	10	10	20		9		5	23	SRA
50	0	1	1	10	8	18		5		5	13	SRA
50	18	5	23	10	10	20		8		6	25	SRA
48	7	2	9	10	10	20		10		7	45	SRA
46	1	0	1	10	8	18		2		2	41	Cognitive
44	10	0	10	10	10	20		6		5	36	SRA
43	1	0	1	10	5	15		8		5	11	Cognitive
43	2	0	2	10	10	20		8		5	11	Cognitive
41	12	0	12	10	8	18		8		3	10	Cognitive
41	7	0	7	10	10	20		7		7	22	SRA
40	2	0	2	10	10	20		7		5	46	Cognitive
39	9	1	10	10	8	18		9		2	14	SRA
37	9	0	9	10	8	18		5		5	29	Cognitive
36	4	0	4	10	8	18		9		2	19	Cognitive
36	3	1	3	10	10	20		8		4	19	Cognitive
35	3	0	3	8	10	18		7		1	8	Cognitive
34	3	0	3	10	10	20		9		3	49	SRA

APPENDIX IV (CONT)

Hi-status: N = 21

Lo-status: N = 28

Hi-status: (N = 21)	12 Cognitive Strategy First
	9 SRA Strategy First

Lo-status: (N = 28)	13 Cognitive Strategy First
	15 SRA Strategy First

APPENDIX V

TEST SCORES

Average literal and inferential reading comprehension test scores for:-

1. Pre-test
2. Mid-term post-test
3. Terminal post-test
4. Terminal post-test repeated 12 months after formal training ceased.

GRAPH A

A Average INFERENTIAL test scores of 13 high-status learners

(COGNITIVE Strategy first)

$$6 + 0 + 6 + 2 + 6 + 0 + 5 + 6 + 3 + 8 + 4 + 7 + 5$$

$$= 58 \qquad 58 \div 13 = 4,46$$

Average INFERENTIAL test scores of 13 lo-status learners

(COGNITIVE Strategy first)

$$6 + 4 + 4 + 9 + 4 + 5 + 3 + 4 + 4 + 4 + 2 + 2 + 1$$

$$= 52 \qquad 52 \div 13 = 4,00$$

Average INFERENTIAL test scores of 13 hi-status learners after

12 sessions (COGNITIVE Strategy first)

$$7 + 5 + 7 + 6 + 6 + 8 + 4 + 6 + 5 + 4 + 1 + 5 + 6$$

$$= 70 \qquad 70 \div 13 = 5,38$$

Average INFERENTIAL test scores of 13 lo-status learners

(COGNITIVE Strategy first) after 12 sessions

$$5 + 2 + 3 + 2 + 3 + 3 + 5 + 8 + 2 + 4 + 0 + 3 + 1$$

$$= 41 \qquad 41 \div 13 = 3,15$$

A Average INFERENTIAL test scores of 13 hi-status learners after 24 sessions (COGNITIVE Strategy first)

$$7 + 5 + 4 + 5 + 8 + 5 + 5 + 5 + 6 + 7 + 4 + 7 + 5$$

$$= 73 \qquad 73 \div 13 = 5,61$$

Average INFERENTIAL test scores of 13 lo-status learners after 24 sessions (COGNITIVE Strategy first)

$$6 + 4 + 2 + 5 + 10 + 3 + 3 + 3 + 4 + 7 + 0 + 1 + 3$$

$$= 51 \qquad 51 \div 13 = 3,92$$

Average INFERENTIAL test scores of 12 hi-status learners 12 months after formal training (COGNITIVE Strategy first)

$$7 + 6 + 3 + 7 + 8 + 4 + 3 + 6 + 4 + 2 + 6 + 5 = 61$$

$$61 \div 12 = 5,10$$

Average INFERENTIAL test scores of 13 lo-status learners 12 months after formal training (COGNITIVE Strategy first)

$$8 + 4 + 6 + 6 + 8 + 3 + 2 + 5 + 3 + 5 + 5 + 4 + 1 = 60$$

$$60 \div 13 = 4,60$$

GRAPH B

B Average LITERAL test scores for other half of class
(SRA Strategy first) (hi-status, N = 10)

$$9 + 7 + 7 + 9 + 9 + 10 + 9 + 9 + 10 + 8$$

$$= 87 \qquad 87 \div 10 = 8,7$$

Average LITERAL test scores for other half of class

(SRA Strategy first) (lo-status, N = 16)

$$8 + 9 + 9 + 10 + 9 + 10 + 6 + 10 + 8 + 7 + 8 + 9 + 7 + 8 + 5 + 6$$

$$= 129 \qquad 129 \div 16 = 8,06$$

Average LITERAL test scores for other half of class

(SRA Strategy first), high-status, N = 10, after 12 sessions

$$7 + 8 + 8 + 8 + 8 + 8 + 7 + 7 + 8 + 7$$

$$= 76 \qquad 76 \div 10 = 7,6$$

Average LITERAL test scores for other half of class

(SRA Strategy first) lo-status, N = 16, after 12 sessions

$$8 + 8 + 7 + 7 + 10 + 7 + 6 + 6 + 6 + 7 + 9 + 8 + 4 + 10 + 5 + 9$$

$$= 117 \qquad 117 \div 16 = 7,3$$

B Average LITERAL test scores for other half of class

(SRA Strategy first), hi-status learners, N = 10, after 24 sessions

$$6 + 2 + 6 + 5 + 6 + 3 + 5 + 2 + 8 + 6$$

$$= 49 \quad 49 \div 10 = 4,90$$

Average LITERAL test scores for other half of class

(SRA Strategy first), lo-status, N = 16, learners, after 24 sessions

$$6 + 8 + 9 + 5 + 9 + 8 + 5 + 6 + 2 + 7 + 6 + 9 + 7 + 7 + 6 + 9$$

$$= 109 \quad 109 \div 16 = 6,8$$

Average LITERAL test scores for other half of class

(SRA strategy first), hi-status, N = 9, 12 months after formal training

$$0 + 3 + 6 + 10 + 5 + 8 + 10 + 7 + 6 = 55$$

$$55 \div 9 = 6,10$$

Average LITERAL test scores for other half of class

(SRA Strategy first), lo-status, N = 15, 12 months after formal training

$$8 + 8 + 8 + 8 + 7 + 9 + 6 + 9 + 5 + 8 + 10 + 6 + 7 + 9 + 9$$

$$= 117 \quad 117 \div 15 = 7,80$$

GRAPH C

C Average INFERENTIAL test-scores for half the class
(SRA Strategy first), hi-status, N = 10

$$4 + 6 + 2 + 5 + 7 + 8 + 7 + 7 + 4 + 5$$

$$= 55 \quad 55 \div 10 = 5,5$$

Average INFERENTIAL test-scores for half the class
(SRA Strategy first), lo-status N = 16.

$$6 + 8 + 4 + 8 + 9 + 6 + 6 + 7 + 1 + 9 + 5 + 4 + 2 + 2 + 4 + 0$$

$$= 81 \quad 81 \div 16 = 5,06$$

Average INFERENTIAL test-scores for half the class
(SRA Strategy first), hi-status N = 10, after 12 sessions

$$5 + 2 + 5 + 7 + 8 + 8 + 2 + 4 + 5 + 1$$

$$= 47 \quad 47 \div 10 = 4,7$$

Average INFERENTIAL test-scores for half of the class
(SRA Strategy first), lo-status N = 16, after 12 sessions

$$1 + 9 + 2 + 0 + 5 + 6 + 4 + 7 + 5 + 5 + 2 + 5 + 2 + 4 + 0 + 3$$

$$= 60 \quad 60 \div 16 = 3,75$$

C Average INFERENTIAL test-scores for half the class
(SRA Strategy first), hi-status, N = 10, after 24 sessions)

$$6 + 8 + 8 + 7 + 7 + 8 + 2 + 6 + 3 + 3$$

$$= 58 \quad 58 \div 10 = 5,8$$

Average INFERENTIAL test-scores for half the class

(SRA Strategy first), lo-status, N = 16, after 24 sessions

$$1 + 6 + 6 + 7 + 8 + 5 + 8 + 5 + 5 + 4 + 5 + 7 + 4 + 3 + 4 + 5$$

$$= 83 \quad 83 \div 16 = 5,18$$

Average INFERENTIAL test-scores for half the class

(SRA Strategy first), hi-status N = 9, 12 months after
formal training

$$2 + 6 + 5 + 6 + 3 + 9 + 5 + 5 + 9 = 50$$

$$50 \div 9 = 5,60$$

Average INFERENTIAL test-scores for half the class

(SRA Strategy first) lo-status N = 15, 12 months after
formal training

$$4 + 9 + 5 + 10 + 6 + 6 + 7 + 5 + 5 + 6 + 7 + 5 + 7 + 2 + 3$$

$$= 87 \quad 87 \div 15 = 5,80$$

GRAPH D

D Average LITERAL test-scores for other half of class

(COGNITIVE Strategy first), hi-status, N = 13

$$10 + 6 + 5 + 7 + 8 + 7 + 10 + 7 + 9 + 9 + 9 + 10 + 10$$

$$= 107 \qquad 107 \div 13 = 8,23$$

Average LITERAL test-scores for other half of class

(COGNITIVE Strategy first), lo-status N = 13

$$10 + 7 + 10 + 2 + 9 + 10 + 7 + 6 + 5 + 8 + 10 + 7 + 3$$

$$= 94 \qquad 94 \div 13 = 7,23$$

Average LITERAL test-scores for other half of class

(COGNITIVE Strategy first), hi-status N = 13,

after 12 sessions

$$10 + 6 + 5 + 7 + 10 + 9 + 7 + 8 + 7 + 8 + 9 + 10 + 2$$

$$= 98 \qquad 98 \div 13 = 7,54$$

Average LITERAL test-scores for other half of the class

(COGNITIVE Strategy first), lo-status N = 13, after 12 sessions

$$8 + 3 + 9 + 4 + 9 + 7 + 4 + 8 + 5 + 4 + 9 + 7 + 3$$

$$= 80 \qquad 80 \div 13 = 6,15$$

D Average LITERAL test-scores for other half of class

(COGNITIVE Strategy first), hi-status N = 13, after 24 sessions

$$9 + 3 + 7 + 7 + 9 + 5 + 8 + 9 + 7 + 6 + 7 + 5 + 1$$

$$= 83 \quad 83 \div 13 = 6,38$$

Average LITERAL test-scores for other half of class

(COGNITIVE Strategy first), lo-status N = 13, after 24 sessions

$$7 + 7 + 8 + 10 + 8 + 9 + 6 + 3 + 4 + 8 + 7 + 8 + 7$$

$$= 92 \quad 92 \div 13 = 7,07$$

Average LITERAL test-scores for other half of class

(COGNITIVE Strategy first), hi-status N = 12,

12 months after formal training

$$10 + 8 + 9 + 7 + 9 + 9 + 8 + 9 + 9 + 7 + 10 + 4 = 99$$

$$99 \div 12 = 8,30$$

Average LITERAL test-scores for other half of class

(COGNITIVE Strategy first), lo-status N = 13,

12 months after formal training

$$7 + 7 + 10 + 8 + 9 + 10 + 2 + 8 + 8 + 7 + 5 + 8 + 7$$

$$= 96 \quad 96 \div 13 = 7,40$$

APPENDIX VI

KITCHING'S (1984) "A TEST OF PROFICIENCY IN ENGLISH
WITH REGARD TO:

LANGUAGE USAGE

READING COMPREHENSION

WRITING SKILLS"

APPENDIX VI

A TEST OF PROFICIENCY IN ENGLISH

WITH REGARD TO:

LANGUAGE USAGE

READING COMPREHENSION

WRITING SKILLS

APPLICATION OBJECTIVE: TO ELICIT
INFORMATION FOR A NORM-REFERENCED
STUDY

The test consists of FOUR SECTIONS. Please complete all four. All answers are to be provided on the question paper itself. Read the instructions carefully.

All information will be regarded as STRICTLY CONFIDENTIAL

Thank you for your co-operation.

Questions in this section are multiple choice questions. There are five possible answers marked A B C D or E. Only one is correct. Draw a circle around the correct answer.

eg. The sentence that follows has been cut up into sections. There is only one spelling error in the entire sentence. Draw a circle around the letter opposite the section in which you find the error:

He was in distress	A
because of stomach cramps,	B
so the lifeguard	<input checked="" type="radio"/> C
immediately swam	D
to his rescue	E

The correct answer is C.. The word lifeguard is incorrectly spelt. The four questions that follow are the same as the example just given:

- | | | |
|----|---|-----------------------|
| 1. | Many extraordinary
and exaggerated reports
about bullion heists
have been received
during recent times. | A
B
C
D
E |
| 2. | The government has
expressed dissatisfaction
at the corrupt
state of affairs
existing in business circles | A
B
C
D
E |
| 3. | There was much excitement
and anxiety
when the accused
was acquitted
and declared innocent. | A
B
C
D
E |

4. Successful applicants _____ A
 will be expected _____ B
 to assume duties _____ C
 in the accounts section _____ D
 when necessary. _____ E

In the sentences that follow a word or words have been left out. From the five possible answers you must choose the correct one and draw a circle around the letter:

5. The two of them exchanged gifts and offered _____ the sign of peace.
 each other the other one another some themselves
 A B C D E
6. You can't say that about Miss Smith, she's a teacher of _____
 me his my her your
 A B C D E
7. _____ of the women in the room owns a lapdog.
 some all both each every
 A B C D E
8. He said I was _____ nonsense.
 speaking saying talking telling chatting
 A B C D E
9. John is _____ than both Mary and James.
 as tall the tallest the taller more tall taller
 A B C D E
10. I'm not quite sure. The bell went _____ eight o'clock.
 at about approximately on time at approximately in time
 A B C D E

11. _____ you produce some form of identification, we cannot allow you to go in.

because if when unless despite
A B C D E

12. James will never reach the summit _____ hard he tries.

however even though no matter unless despite
A B C D E

13. The cake was so delicious _____ he had it all.

so that that so for because
A B C D E

14. Continue working until the supervisor _____ you to go.

will tell tells will be telling told will have told
A B C D E

15. He never realised that before he arrived the dog _____.

has been released A
was released B
was being released C
will have been released D
had been released E

16. He may not come but we'll get ready in case he _____.

will is may does might
A B C D E

17. James ought not to _____ swimming but he did.

go have gone having gone be going went
A B C D E

18. It is time you _____ otherwise you'll be late for your class.

are going go have gone should go went
A B C D E

In the sentence that follows you must insert the word provided where it best fits in:

19. always

I only take a little wine.

- (A) I (B) only (C) take (D) a little wine (E)

In the questions that follow a certain key word, underlined, is used in five different sentences. In one of those sentences the word, or a form of the word, is incorrectly used. You must identify this sentence:

20. mug

- A. These days one of the hazards of urban life is getting mugged.
- B. They got stuck in the mug and a tractor was needed to get them out.
- C. The weather today is unusually hot and muggy.
- D. Hand me a mug of coffee please.
- E. He doesn't know the answer because he's a real mug.

21. break

- A. There was a welcome break in the weather.
- B. It is good to break away sometimes.
- C. Sometimes one just doesn't get an ever break.
- D. Often one needs to break down in order to rebuild.
- E. I'm afraid you'll have to pay for the breaks.

22. order

- A. Arrange these results in order of merit please.
- B. He ordered me to go at once.
- C. Please order the events to me just as you saw them.

- D. He belongs to the order of St. John.
 E. Don't order any more food, we have enough.

23. bark

- A. It seems his bark is worse than his bite.
 B. The bark of the cinnamon tree is a coveted spice.
 C. Take the torch or you'll bark your shins against the crossbars.
 D. He lives near the bark in the old part of town.
 E. They set sail for the island in a sea-worthy bark.

24. blow

- A. What a blow! We could'nt see for all the dust.
 B. What a blow! He just could'nt make it.
 C. We hailed him on the blow but he didn't hear.
 D. He suffered a severe blow to the head.
 E. During winter northwesterly gales blow in from the Atlantic.

- In the question that follows a certain idiomatic expression is used in the sentence. A number of meanings are then given. Only one is correct. Choose the correct one.

25. Throughout its history not one dollar was ever lost that Wells Fargo did not make good.

make well	A
produce	B
repay	C
promise	D
settle	E

SECTION THREE

Punctuate the following:

What you mean to tell me youve lost it all

SECTION FOUR

The following test is called a cloze test. In case you have never done one before, we are going to give you an example.

In a short passage every seventh word is left out and you must provide the words that you think appeared in the original passage:

E.G.

Both boys plunged their hands through the crumbling wood. They had found the pirate's treasure! There were hundreds of coins, and near the bottom was something heavy, wrapped in decaying cloth.

The boys put the ¹ _____ on board their launch and set ² _____ course down the coast for Boston, ³ _____ they reached next morning. By nine ⁴ _____ they were telling their story to ⁵ _____ officials of the Atlantic National Bank.

The answers to the question are as follows:

The boys put the ¹ treasure on board their launch and set ² a course down the coast for Boston, ³ which they reached next morning. By nine ⁴ o'clock they were telling their story to ⁵ disbelieving officials of the Atlantic National Bank.

You needn't only use the words that are used in the passage but words that will make sense. So, for instance, with ¹ treasure you could also have used money, coins or discovery and for ⁵ disbelieving you could also have used amazed, astounded, puzzled, dumbstruck, etc.

Quite easy, isn't it? Now study the passage that follows and then fill in the missing words in the spaces provided.

The Secret Life of the Salmon

The life of the salmon begins in an egg- a tiny red ball which lies buried in the gravel bed of some swift-flowing northern stream. After the little fish is hatched he stays there in the dark for many days. During this time he lives off the soft outside, or "sac," of the egg, which is still fastened to him. If he is lucky, he may live eight or nine years, but this is the only time in his life when he is perfectly safe.

When the ¹ _____ is finished he pushes his way ² _____ out of the gravel. Now his ³ _____ begin. Still less than an inch ⁴ _____ he is a tasty morsel for ⁵ _____ neighbours like eels, ducks and larger ⁶ _____. Within a few days, many of ⁷ _____ hundreds of brothers and sisters have ⁸ _____ gobbled up.

He, in turn, gobbles ⁹ _____ smaller than himself. He grows much ¹⁰ _____ slowly than the trout and his ¹¹ _____ neighbours. After spending perhaps two years ¹² _____ his gravel bed, he is only ¹³ _____ few inches long and weighs a ¹⁴ _____ ounces.

Then one morning he feels ¹⁵ _____ must go on a journey. It's ¹⁶ _____ for him, and all the other ¹⁷ _____ of his age, to start down-stream ¹⁸ _____ the sea. They cannot help themselves, ¹⁹ _____ they seem not to want to ²⁰ _____. As the current carries them along, ²¹ _____ heads are pointed up-stream, as if ²² _____ were fighting against the instinct that ²³ _____ them down.

More dangers lie ahead. ²⁴ _____ salmon is swept down swift rapids ²⁵ _____ the white water boils over the ²⁶ _____. He is carried over steep waterfalls. ²⁷ _____ travels many miles.

At last the ²⁸ _____ slackens, the river broadens out as ²⁹ _____ nears the sea. The water becomes ³⁰ _____. As he tastes salt water the little fish no longer hesitates. He turns, heads out to sea - and vanishes. Nobody knows where he goes.

APPENDIX VII

RANK ORDER OF SUBJECTS (N = 52) HIGH-STATUS AND
LOW-STATUS STUDENTS: "A TEST OF PROFICIENCY IN ENGLISH"
(KITCHING, 1984).

CORRELATION BETWEEN EXAMINERS' AND MODERATOR'S (INVESTIGATOR'S)
SCORES

APPENDIX VIIA TEST OF PROFICIENCY IN ENGLISH: CORRELATION BETWEEN EXAMINER'S
AND MODERATOR'S SCORES

RANK ORDER OF SUBJECT	NO. OF SUBJECT	EXAMINERS' A, B, & C'S SCORES OUT OF 100	MODERATOR'S SCORE OUT OF 100	DIFFERENCE	FINAL SCORE OUT OF 100
1	5	79	80	+ 1	80
2	37	79	78	- 1	78
3	30	78	77	- 1	77
4	35	70	72	+ 2	72
4	52	69	72	+ 3	72
4	47	70	72	+ 2	72
7	24	71	71	+ 0	71
7	39	67	71	+ 4	71
9	26	69	69	+ 0	69
9	51	65	69	+ 4	69
11	34	66	68	+ 2	68
12	48	70	67	- 3	67
12	77	68	67	- 1	67
14	28	72	66	- 6	66
14	44	63	66	+ 3	66
16	31	62	65	+ 3	65
16	38	63	65	+ 2	65
18	40	67	64	- 3	64
19	27	58	63	+ 5	63
20	9	67	62	- 5	62
21	16	68	61	- 7	61
21	1	62	61	- 1	61
21	20	66	61	- 5	61
24	15	62	59	- 3	59
24	42	60	59	- 1	59
26	2	61	58	- 3	58
27	21	61	57	- 4	57
28	43	58	56	- 2	56
29	12	60	55	- 5	55
29	32	60	55	- 5	55

RANK ORDER OF SUBJECT	NO.OF SUBJECT	EXAMINERS' A,B & C's SCORES OUT OF 100	MODERATORS' SCORE OUT OF 100	DIFFERENCE	FINAL SCORE OUT OF 100
29	18	55	55	+ 0	55
32	3	54	54	+ 0	54
32	4	57	54	- 3	54
32	50	61	54	- 7	54
35	33	59	53	- 6	53
36	17	50	51	+ 1	51
36	6	56	51	- 5	51
36	23	52	51	- 1	51
39	13	51	50	- 1	50
39	25	51	50	- 1	50
40	45	53	48	- 5	48
41	41	49	46	- 3	46
42	36	47	44	- 3	44
43	11	43	43	+ 0	43
44	10	44	41	- 3	41
44	22	45	41	- 4	41
47	46	45	40	- 5	40
48	14	40	39	- 1	39
49	29	37	37	+ 0	37
50	19	41	36	- 5	36
51	8	39	35	- 4	35
52	49	35	34	- 1	34
<p>The moderator tended to raise the essay scores of the high-status and lower the essay scores of the low-status students. This countered the tendency of examiners to cluster the essay marks around the mean.</p>					
1987	Range	Median	Mean	Standard Deviation	
N = 52	34 - 80	58	58	11,89	

APPENDIX VIII

COMPARISON OF RANGE OF SCORES, MEDIANS, MEANS AND STANDARD
DEVIATIONS OBTAINED IN "A TEST OF PROFICIENCY IN ENGLISH"
IN KITCHING'S (1984) PILOT STUDY IN 1984 AND THE SCORES
OBTAINED BY THE INVESTIGATOR IN 1987.

APPENDIX VIII

COMPARISON BETWEEN NORM-REFERENCED EL₂ PROFICIENCY IN ENGLISH TEST SCORES OF FIRST-YEAR DIPLOMA IN EDUCATION TEACHER TRAINEES IN 1984 AND 1987 WITH TEST SCORES OBTAINED BY AFRIKAANS-SPEAKING MATRICULANTS IN KITCHING'S (1984) PILOT STUDY.

YEAR	RANK	RANGE OF SCORES	MEDIAN	MEAN	STANDARD DEVIATION
Pilot Study (N = 100)	1 - 100	29 - 84	55	53,73	12,89
1984 (N = 89)	1 - 89	26 - 80	54	52,30	11,41
1987 (N = 52)	1 - 52	34 - 80	58	58,00	11,89

NOTE: The standard deviations and range of scores are comparable for all three groups of testees. The mean for the 1987 (N = 52) EL₂ group was higher probably owing to slightly stricter selection criteria for teacher trainees in that year. The group was also the smallest in number.

APPENDIX IX

DISTRIBUTION OF SCORES:

"A TEST OF PROFICIENCY IN ENGLISH" OF FIRST-YEAR DIPLOMA
IN EDUCATION TEACHER TRAINEES IN 1984 AND 1987

APPENDIX IX

DISTRIBUTION OF SCORES FOR NORM-REFERENCED EL₂ PROFICIENCY TEST
OF FIRST-YEAR DIPLOMA IN EDUCATION TEACHER TRAINEES IN 1984 AND 1987

DISTRIBUTION OF SCORES:

SYMBOL	A	B	C	D	E	F	G	TOTAL NUMBER OF TESTEES
%	100-80	79-70	69-60	59-50	49-40	39-30	29-0	
YEAR 1984	1	3	17	35	20	10	3	N = 89
YEAR 1987	1	7	15	17	7	5	0	N = 52
% FOR 1984 SYMBOLS	1,12	3,37	19,10	39,32	22,47	11,23	3,37	
% FOR 1987 SYMBOLS	1,92	13,46	28,85	32,69	13,46	9,15	0	

APPENDIX X A, B AND C

THE TESTS OF LITERAL AND INFERENTIAL READING COMPREHENSION

STUDENT-GENERATED QUESTIONS AND ANSWERS:

PRETEST : JANUARY 1987

MID-TERM POST-TEST : MAY 1987

TERMINAL POST-TEST : SEPTEMBER 1987

APPENDIX X A

READING COMPREHENSION : INSTRUCTIONS

Passage A, B & C:

Set and answer five literal and five inferential questions on the passage below. Use complete sentences (not merely words or phrases). Number the questions: A, "Literal": 1 - 5 and B, "Inferential": 1 - 5.

Literal questions = reading on the line (questions that don't need much reasoning).

Inferential questions = reading between the lines (thinking, more difficult questions).

EXAMPLES OF LITERAL AND INFERENTIAL QUESTIONS

Passage:

"Three blind mice, see how they run!
They all ran after the farmer's wife,
Who cut off their tails with a carving knife,
Did you ever see such a thing in your life
As three blind mice?"

LITERAL QUESTIONS:

Question 1

How did the mice lose their tails?

Answer

The farmer's wife cut them off.

Question 2

What is a carving-knife normally used for?

Answer

It's used to cut cooked meat at table.

Inferential questions/.....

INFERENCEAL QUESTIONS:

Question 1

If the mice were blind, how could they have run after the farmer's wife?

Answer

They followed the sound of her footsteps.

OR

The writer is only trying to be funny (he is trying to amuse the children for whom he wrote the poem).

Question 2

What do you think were the feelings of the farmer's wife when the mice ran after her?

Answer

She felt shocked, frightened and angry.

NOTE: USE OF LANGUAGE

Although the quality of your questions and answers is important, marks will also be given for use of language (grammar, spelling and punctuation).

PASSAGE A:/.....

APPENDIX X A

PRE-TEST OF LITERAL AND INFERENTIAL READING COMPREHENSION

Passage A:

In the field of impulse buying psychologists have joined merchandising experts to persuade the wife to buy things she may not really need or even want until she sees them invitingly presented. The 60 million women who go into supermarkets once a week are getting "help" in their purchases from psychologists hired by the food merchandisers. On May 18, 1956, "The New York Times" printed a remark by a young man named Gerald Stahl, vice-president of the Package Designers Council. He stated: "Psychiatrists say that people have too much to choose from. They want help. They will take the package that hypnotizes them into picking it."

He urged food packers to put more hypnosis into their package designs. The housewife would stick out her hand for it rather than one of many rivals.

Mr Stahl found that it takes most women just 20 seconds to cover an aisle in the market if she doesn't tarry. A good package should hypnotize the women like a torch waved in front of their eyes. Some colours such as red and yellow help to create hypnotic effects. Just putting the name and maker of the product on the box is not enough. It has no effect on the modern woman.

She can't read anything until she has picked the box up in her hands. To get the woman to reach for the package, designers are now using "symbols that have a dreamlike quality." To cite examples of dreamlike quality, he mentioned the delicious cakes on the packages of cake mixes, sizzling steaks and mushrooms fried in butter. The idea is to sell the sizzle rather than the meat. By 1956 designers had even made a box that would give a soft sales talk when the shopper fingered it. It might also stress the brand name. The talk is on a strip that broadcasts when a shopper's finger rubs it.

The package people believe that it is the package that makes or breaks the impulse sale. Other experts agree. Some psychologists say a woman's eye is most quickly drawn to items wrapped in red; a man's eye to items wrapped in blue. Students in this field have wondered why women are so susceptible to red. One package designer has developed an interesting theory. He concludes that most women shoppers leave their glasses at home or will not wear them in public if they can avoid it. A package must therefore stand out "from the blurred confusion."

Other merchandisers, I should add, think that in the supermarket jungle the all-important fact in impulse buying is shelf position. Many see to it that their "splurge" items tend to be at eye level. Most of the modern markets, by the mid-fifties, were laid out so that the high-profit impulse items would be best noticed. In many stores they were on the first or only aisle the shopper could enter. Among the best tempters, they say, are those in glass jars where contents can be seen. Some food is out in the open, to be seen and savoured. "People like to see a lot of goods", a manager said. "When there are only three or four cans of an item on a shelf, they just won't move." People don't want the last pack. A test showed that shoppers buy 22 per cent more if the shelves are kept full.

(562)

MID-TERM POST-TEST OF LITERAL AND INFERENTIAL READING COMPREHENSION

Passage B:

A brewery making two kinds of beer made a survey to find out what kind of people drank each beer, as a guide to its merchandisers. It asked people known to favour its general brand name: "Do you drink the light or the regular?" To its surprise it found people reporting that they drank light over the regular by better than three to one. The truth was that for years the company, to meet demand, had been brewing nine times as much regular as light. It decided that in asking that question it was in effect asking: "Do you drink the beer preferred by people of refinement, or do you just drink the regular stuff?"

The Colour Research Institute conducted an experiment when it began doubting people's comments. While waiting for a lecture, women had the choice of two waiting-rooms. One was a Swedish room with gentle tones. It was carefully designed to promote a relaxed feeling. The other was a traditional room filled with period furniture, oriental rugs, expensive wallpaper.

It was found that almost all the women went into the Swedish room to do their waiting. Only when every chair was filled did the women start over-flowing into the more ornate room. After the lecture the ladies were asked: "Which of those two rooms do you like better?" They looked at the two rooms thoughtfully and then 84% of them said the period room was nicer! Again the institute asked people if they borrowed money from personal-loan companies. Every person said no. Some virtually shouted their answer. The truth was that those interviewed were people listed in the records of a local loan company as borrowers. The Institute had a strange encounter with this behaviour when it tested package designs for a new detergent. It wanted to see if a woman is influenced more that she realizes, in her opinion of a product, by the package. It gave housewives three different boxes filled with detergent and asked them to try them out for a few weeks and report which was best for delicate clothing. The wives thought that they had been given three different types of detergent. Actually only the boxes were different. The detergents inside were identical.

The design for one was mostly yellow. Yellow was used because some merchandisers were sure that it was the best for store shelves as it has strong visual impact. Another box was predominantly blue without any yellow in it. The third box was blue but with splashes of yellow.

The housewives reported that the detergent in the yellow box was too strong. It even allegedly ruined their clothes in some cases. As for the detergent in the blue box, they said it left their clothes dirty-looking. The third box, which contained an "ideal" balance of colours in the package design, overwhelmingly got favourable responses. The women used such words as "fine" and "wonderful" to describe the effect of that detergent.

A department store also tried an experiment. One of its slowest-moving items was priced at 14 cents. It changed the price to two for 29 cents. Sales promptly increased by 30% when the item was offered at this "bargain price."

(530)

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APPENDIX X C

TERMINAL POST-TEST OF LITERAL AND INFERENTIAL READING COMPREHENSION

Passage C:

The merchandisers of prunes had become very discouraged in their efforts to get Americans to eat more prunes. When word-association tests were tried on people, the first thoughts that came to their minds about prunes were "old maid" or "dried up". Some remembered that as children they were often told to eat prunes because they "ought to" or "prunes are good for you". Prunes were also associated with laxatives. Advertisers changed the image of the prune. In the new ads bright colours were used and childish figures were shown playing. Slowly the figures changed from children into pretty girls figure skating or playing tennis. One ad said, "Prunes help bring colour to your blood and a glow to your face". Soon the prune became a true-life Cinderella. By 1955 the prune was selling well while the price and use of most food crops were dropping.

Margarine makes thought they had a cheap substitute for butter. However, it wasn't selling well. It sold for half the price of butter, it looked and tasted like butter, yet most people said it wasn't as good.

The Colour Research Institute tested a large number of women at a luncheon. They were asked if they could tell the difference between butter and margarine. More than 90% insisted that they could. They preferred butter because margarine tasted "oily", "greasy" or "more like lard than butter". Two pats were served to each lady. One was yellow (margarine) and the other white (freshly churned butter). The ladies were asked if they could tell any difference in the taste. More than 95% identified the yellow pat as butter and used words such as "pure" and "fresh" to describe it. They said the white pat was margarine and complained that it was oily and tasted like shortening.

The maker of fibre glass luggage found in tests that the luggage was virtually indestructible. Its ad men persuaded the company to boast that the luggage was so tough that it could survive even a drop from a plane.

When the luggage was dropped, sales dropped too. Again, unpleasant associations were aroused.

Advertisements of low-calorie beer also fell flat. Calorie consciousness is really a form of penance. People go on diets, some psychologists thought, to punish themselves for self-indulgence. "Low-calorie diets are not supposed to be pleasant, or else they will not fulfil their purpose," they explained to brewers. The new beer advertisements therefore showed a picture of a hot, fat man bare to the belly tossing high a bottle of beer. The caption read: "Beer right from the bottle is manly, hearty." This is what, the ad men believe, the beer consumer wants the brewers to tell him his drink is. Blatz beer may have had this advice in mind when it came up with a new slogan: "Made by people who like beer for people who like to drink beer - and lots of it!"

Television is certainly the most powerful advertising medium. Thanks to TV most children learn to sing beer and other commercials before they learn to sing the Star-Spangled Banner. Children not only sing the merits of advertised products but do it at no extra cost to the advertiser. They cannot be turned off as a set can. As Herb Sheldon, TV star with a large following of children, remarked in 1956: "Children are living, talking records of what we tell them every day."

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APPENDICES XI A AND B

MEASURES OF READABILITY : PASSAGES A, B AND C

1. THE FRY GRAPH
2. THE FLESCH FORMULA

APPENDIX XI A

READABILITY MEASURES OF PASSAGES IN PRE-TEST, MID-TERM POST-TEST
AND TERMINAL POST-TEST

Readability Measure, Fry Graph (Harrison, 1980: 73)

TEST	SAMPLE	SENTENCES PER 100 WORDS	SYLLABLES PER 100 WORDS	ESTIMATE OF READABILITY ON FRY GRAPH	U.K. READING LEVEL IN YEARS
Pre-Test	1	6,36	146		
	2	7,00	132		
	3	6,36	132		
	4	7,20	143		
	5	6,59	123		
AVERAGE		6,70	135	7	7 + 5 = 12
Mid-Term Post-Test	1	6,22	133		
	2	8,44	155		
	3	7,01	153		
	4	8,27	151		
AVERAGE		7,49	148	7	7 + 5 = 12
Terminal Post-Test	1	6,71	143		
	2	7,69	129		
	3	7,47	140		
	4	7,70	152		
	5	7,42	133		
AVERAGE		7,40	139	7	7 + 5 = 12

APPENDIX XI B

Readability Measure, Flesch Formula (Harrison, op.cit. 78)

TEST	SAMPLES	NO. OF SYLLABLES PER 100 WORDS	NO. OF WORDS PER SENTENCE	FORMULA : CALCULATIONS	CLASSIFICATION OF PASSAGE
Pre-test	1	146	15,72	$206,835 - (0,846 \times 135) - (1,015 \times 14,96);$ $206,835 - 114,21 - 15,18;$	
	2	132	14,29		
	3	132	15,72		
	4	143	13,89		
	5	123	15,17		
AVERAGE		135	14,96	$92,625 - 15,18 = 77,45$	"Fairly Easy"
Mid-term Post-test	1	133	16,08	$206,835 - (0,846 \times 148) - (1,015 \times 13,57);$ $206,835 - 125,208 - 13,77$	"Standard" : between "Fairly Easy" & "Fairly Difficult"
	2	155	11,85		
	3	153	14,27		
	4	151	12,09		
AVERAGE		148	13,57	$81,63 - 13,77 = 67,86$	
Terminal Post-test	1	143	14,90	$206,835 - (0,846 \times 139) - (1,015 \times 13,55);$ $206,835 - 117,594 - 13,75;$	
	2	129	13,00		
	3	140	13,39		
	4	152	12,99		
	5	133	13,48		
AVERAGE		139	13,55	$89,24 - 13,75 = 75,49$	"Fairly Easy"

APPENDIX XII

A TAXONOMY OF READING COMPREHENSION SUBSKILLS (ADAPTED FROM
LUNZER AND GARDNER, 1979).

APPENDIX XIILunzer and Gardner's taxonomy of reading comprehension subskills:

- W** : Word meanings (Word recognition, synonymous expressions, antonyms, explanations).
Semantic, phonological and morphological meanings.
- WI** : Words in context; the ambiguity of words; context determines meaning.
- L** : Literal comprehension; location of verbatim quotation which answers the question; reading "on the line".
- ISS** : Inferences from single strings; drawing inferences from a word, phrase or sentence (string) but which do not require taking the whole text into consideration; reading "between the lines".
- IMS** : Drawing inferences from multiple strings; here the inferences are drawn by comparing two or more facts appearing in different parts of the text.
- M** : Interpretation of metaphor; here the reader is required to show an understanding and appreciation of the meanings of metaphorical and other figurative language.
- S** : Finding the salient facts; here the main ideas in the complete text are elucidated.
- J** : Judgment; this involves evaluating the adequacy of the ideas presented in the text in the light of present knowledge or making a value judgment of the quality of the text.

APPENDIX XIII

A COGNITIVE READING COMPREHENSION TRAINING PROGRAMME

COGNITIVE READING COMPREHENSION TRAINING PROGRAM FOR FIRST-YEAR EL₂ AFRIKAANS-SPEAKING COLLEGE STUDENTS.
 LITERAL AND INFERENTIAL SELF-GENERATED READING COMPREHENSION QUESTION AND ANSWER STRATEGY
 (12 WEEKLY ONE-HOUR SESSIONS)

LESSON NO.	OBJECTIVES OF THE LESSON	CONTENT OF LESSON	METHODS/ STRATEGIES	MEDIA	EVALUATION	COMMENTS
1	<ol style="list-style-type: none"> 1. Explanation of cognitive reading processes. 2. Development of positive attitude towards reading. 3. Definition & exemplification of literal versus inferential reading comprehension. 	<ol style="list-style-type: none"> 1. Lecture - introduction to taxonomies of reading sub-skills (eg. Lunzer & Gardner); 2. Definition & examples of subskills, eg. semantic, phonological & morphological meanings. 	Lecture; discussion	Over-head projector, Chalk-board	Concurrent: question & answer	Overall aims of reading development strategies (programmed versus cognitive) should be discussed.
2	<ol style="list-style-type: none"> 1. Provision of practice in the generation & answering of literal & inferential reading comprehension questions 2. Development of students' confidence in setting & answering 	<ol style="list-style-type: none"> 1. Revision of main points in lesson 1. 2. Text of three of Aesop's Fables. 	small-group work; discussion	as above	<ol style="list-style-type: none"> 1. remediation of students' errors: peer-group & lecturer evaluation of quality of questioning and 	<p>Crucial role of teacher in generating lower-order & higher-order questions should be stressed.</p> <p>Immediate feedback in class allows lecturer to correct</p>

LESSON NO.	OBJECTIVES OF THE LESSON	CONTENT OF LESSON	METHODS/ STRATEGIES	MEDIA	EVALUATION	COMMENTS
	questions in EL ₂				of students' linguistic competence	interlanguage errors; Vague or ambiguous questions are identified & discussed.
3	<p>1. Remediation of common errors in students' literal & inferential questioning strategies</p> <p>2. Student practice in generation of inferential question/answers</p>	<p>1. Summary of major errors & misunderstandings in previous lesson, eg. common language errors; ambiguous questions.</p> <p>2. Text: three more fables from Aesop.</p>	<p>lecture; discussion</p> <p>Individual assignment</p>	<p>as above</p> <p>pencil & paper</p>	<p>lecturer evaluation of each individual script with comments on use of language & quality of questioning.</p>	<p>This lesson was a revision and consolidation of lesson no.2.</p> <p>This lesson stressed inference as it created more problems for the students than literal meanings.</p>

LESSON NO.	OBJECTIVES OF THE LESSON	CONTENT OF LESSON	METHODS/ STRATEGIES	MEDIA	EVALUATION	COMMENTS
4	1. Definition, explication illustration of semantic, morphological & phonological meanings.	Same text as above	lecture; discussion	chalk-board	lecturer evaluation of definitions, explications & illustrations.	This lesson was a revision & consolidation of key concepts like "morphology", "phonology", etc.
5	1. Definition, explication & illustration of metaphorical & other figurative meanings. 2. Provision of student practice in generation of questions/answers on metaphorical meanings.	Text: "Cider with Rosie"; Laurie Lee; Chapter entitled "Sick Boy".	lecture, discussion	over-head projector, chalk-board, paper & pencil	concurrent	Full session of approximately 1 hour was devoted to the crucial role of metaphorical meanings in language.
6	1. Identification, classification & remediation of student errors in setting/answering inferential questions: summary of major areas of weakness.	Student scripts of lesson No. 3	lecture; discussion	over-head projec-	concurrent	As the program progressed, the lecturer gathered examples of misunderstandings on the part of the students. A summary of the major weaknesses in linguistic competence & of the quality of the students' questioning was built up.

LESSON NO.	OBJECTIVES OF THE LESSON	CONTENT OF LESSON	METHODS/ STRATEGIES	MEDIA	EVALUATION	COMMENTS
7	1. Identification, classification & remediation of student problems in setting/answering questions on metaphorical meanings.	Text: same as for lesson no.5	lecture; class discussion	chalk-board	Concurrent; evaluation of each individual script with the particular student.	Follow-up lesson on metaphorical meanings as this revealed particular problems for the students.
8	1. Provision of practice in selecting main ideas (salient points) in a text.	Text: "Arithmetic in a calculator age", <u>Arithmetic Teacher</u> , Z. Usiskin, 1983.	small-group work	over-head transparencies.	peer-group & lecturer evaluation of each group's work done on transparencies: quality of summary & linguistic competence of each group.	Scientific prose was chosen as primary school teachers would need to read educational journals like "Arithmetic Teacher" during course of their professional training
9	1. Definition & exemplification of concepts like, bias, tone, etc. 2. Provision of practice in setting judgmental questions under headings (a) the author's bias; subjectivity & objectivity in a text.	Text: "Let not my country die", Credo Mutwa	1. Lecture & discussion 2. Small-group work	as above (transparencies)	lecturer evaluation of questions/answers of each small group.	The fact that judgmental questions were classified as inferential was emphasized; difficulties of students who still confused literal with inferential questions/answers were discussed

LESSON NO.	OBJECTIVES OF THE LESSON	CONTENT OF LESSON	METHODS/ STRATEGIES	MEDIA	EVALUATION	COMMENTS
	(b)the author's tone. (c)author's use of emotive language. (d)quality & appropriacy of the writing. (e)adequacy of author's ideas/argument.					
10	as above	as above	individual assignment	pencil & paper	lecturer evaluation of quality of individual judgmental questions;identification & remediation of students' language errors.	As questions/answers on judgment revealed many student problems,group work was followed by individual work.
11	1.Practice in applying the full range of inferential questions to a text,employing a taxonomy of comprehension sub-skills.	Text:two more fables from Aesop.	Individual work	pencil & paper	Detailed lecturer evaluation of individual scripts of students with regard to quality of questions & students' linguistic competence.	Preparation for test on inferential & literal reading comprehension.

LESSON NO.	OBJECTIVES OF THE LESSON	CONTENT OF LESSON	METHODS/ STRATEGIES	MEDIA'	EVALUATION	COMMENTS
12	Review & summary of the main principles of a cognitive reading comprehension strategy. Summary of principles of programmed reading schemes.	Students' scripts (assignments)	lecture, discussion	over-head projector, chalk-board	lecturer evaluation of students' grasp of subject matter dealt with.	Detailed revision & consolidation of the principles of the cognitive reading comprehension strategy compared with principles of programmed reading.

TRAINING PROGRAMME : TEXTS EMPLOYEDLESSON TWO

Mister Fox was just about famished, and thirsty too, when he stole into a vineyard where the sun-ripened grapes were hanging up on a trellis in a tempting show, but too high for him to reach. He took a run and a jump, snapping at the nearest bunch, but missed. Again and again he jumped, only to miss the luscious prize. At last, worn out with his efforts, he retreated, muttering: "Well, I never really wanted those grapes anyway. I am sure they are sour, and perhaps wormy in the bargain."

--- oOo ---

A farmer went to the nest of his goose to see whether she had laid an egg. To his surprise he found, instead of an ordinary goose egg, an egg of solid gold. Seizing the golden egg he rushed to the house in great excitement to show it to his wife.

Every day thereafter the goose laid an egg of pure gold. But as the farmer grew rich he grew greedy. And thinking that if he killed the goose he could have all her treasure at once, he cut her open only to find - nothing at all.

--- oOo ---

A dog looking for a quiet and comfortable place to take a nap jumped into the manger of the ox and lay there on the hay.

Some time later the ox, returning hungry from his day's work, entered his stall and found the dog in his manger. The dog, in a rage because he had been awakened from his nap, stood up and barked and snapped whenever the ox came near his hay.

The ox is a patient beast, but finally he protested: "Dog, if you wanted to eat my dinner I would have no objection. But you will neither eat it yourself nor let me enjoy it, which strikes me as a very churlish way to act."

--- oOo ---

One day a dog stole a piece of meat out of a butcher shop, and on his way to a safe place where he could eat it without interruption he had to cross a footbridge over a clear stream. Looking down he saw his own reflection in the water.

Thinking that the reflection was another dog with another piece of meat, and being a greedy dog, he made up his mind to have that also. So he snarled and made a grab for the other dog's meat.

As his greedy mouth opened, out dropped the piece of meat and fell into the stream and was lost.

--- oOo ---

TRAINING PROGRAMME : TEXTS EMPLOYEDLESSON THREE:

A hare was continually poking fun at a tortoise because of the slowness of his pace. The tortoise tried not to be annoyed by the jeers of the hare, but one day in the presence of the other animals he was goaded into challenging the hare to a foot race.

"Why, this is a joke," said the hare. "You know that I can run circles around you."

"Enough of your boasting," said the tortoise. "Let's get on with the race."

So the course was set by the animals, and the fox was chosen as judge. He gave a sharp bark and the race was on. Almost before you could say "scat" the hare was out of sight. The tortoise plodded along at his usual unhurried pace.

After a time the hare stopped to wait for the tortoise to come along. He waited for a long, long time until he began to get sleepy. "I'll just take a quick nap here in this soft grass, and then in the cool of the day I'll finish the race." So he lay down and closed his eyes.

Meanwhile the tortoise plodded on. He passed the sleeping hare and was approaching the finish line when the hare awoke with a start. It was too late to save the race. Much ashamed, he crept away while all the animals at the finish line acclaimed the winner.

--- oOo ---

A crow who had stolen a piece of cheese was flying toward the top of a tall tree where he hoped to enjoy his prize, when a fox spied him. "If I plan this right," said the fox to himself, "I shall have cheese for supper."

So as he/.....

So, as he sat under the tree, he began to speak in his politest tones: "Good day, mistress crow, how well you are looking today! How glossy your wings, and your breast is the breast of an eagle. And your claws - I beg pardon - your talons are as strong as steel. I have not heard your voice, but I am 'certain that it must surpass that of any other bird just as your beauty does."

The vain crow was pleased by all this flattery. She believed every word of it and waggled her tail and flapped her wings to show her pleasure. She liked especially what friend fox said about her voice, for she had sometimes been told that her caw was a bit rusty. So, chuckling to think how she was going to surprise the fox with her most beautiful caw, she opened wide her mouth.

Down dropped the piece of cheese! The wily fox snatched it before it touched the ground, and as he walked away, licking his chops, he offered these words of advice to the silly crow: "The next time someone praises your beauty be sure to hold your tongue."

--- oOo ---

One frosty autumn day an ant was busily storing away some of the kernels of wheat which he had gathered during the summer to tide him over the coming winter.

A grasshopper, half perishing from hunger, came limping by. Perceiving what the industrious ant was doing, he asked for a morsel from the ant's store to save his life.

"What were you doing all during the summer while I was busy harvesting?" enquired the ant.

"Oh," replied the grasshopper, "I was not idle. I was singing and chirping all day long."

"Well," said the ant, smiling grimly as he locked his granary door, "since you sang all summer, it looks as though you would have to dance all winter."

--- oOo ---

TRAINING PROGRAMME : TEXTS EMPLOYEDLESSON FIVE:SICK BOY:

As soon as I recognized the returning face of my sickness - my hands light as feathers, a swaying in the head and lungs full of pulsing thorns - the first thing I did was to recall my delusions and send messages to the anxious world. As I woke to the fever I thought of my subjects, and their concern always gave me comfort. Signals in morse, tapped out on the bed-rail, conveyed brief and austere intelligences "He is ill" (I imagined the first alarm). "He has told his Mother." (Some relief). "He is fighting hard." (Massed prayers in the churches). "He is worse." (Cries of doom in the streets). There were times when I was almost moved to tears as the thought of my anxious people, the invisible multitudes up and down the land joined in grief at this threat to their King. How piteously they awaited each sombre bulletin, and how brave I was meanwhile. Certainly I took pains to give them some thing to be anxious about, but I also bid them be strong. "He wishes no special arrangements made. Only bands and tanks. A parade or two. And perhaps a three minutes' silence."

This would occupy my first morning, with the fever still fresh; but by nightfall I was usually raving. My limbs went first, splintering like logs, so that I seemed to grow dozens of arms. Then the bed no longer had limits to it and became a desert of hot wet sand. I began to talk to a second head laid on the pillow, my own head once removed; it never talked back, but just lay there grinning very coldly into my eyes. The walls of the bedroom were the next to go; they began to bulge and ripple and roar, to flap like pastry, melt like sugar, and run bleeding with hideous hues. Then out of the walls, and down from the ceiling, advanced a row of intangible smiles; easy, relaxed, in no way threatening at first, but going on far too long. Even a maniac's smile will finally waver, but these just continued in silence, growing brighter, colder, and ever more humourless till the sick blood roared in my veins. They were Cheshire-cat smiles, with no face or outlines, and I could see the room clearly through them. But they hung above me like a stain on

the air/.....

the air, a register of smiles in space, smiles without pity, smiles without love, smiling smiles of unsmiling smileness; not even smiles of strangers but smiles of no one, expanding in brilliant silence, persistent, knowing, going on and on..... till I was screaming and beating the bed-rails.

At my scream all the walls shook down like a thunderclap and everything was normal again. The kitchen door opened, feet thumped up the stairs and the girls bustled into the room. "He's been seeing them faces again," they whispered. "It's all right!" they bawled, "There, there! You won't see any more. Have a nice jug of lemon." And they mopped me, and picked up the bedclothes. I lay back quietly while they fussed around; but what could I say to them? That I hadn't seen faces - that I'd only seen smiles? I tried that, but it got me nowhere.

Later, as the red night closed upon me, I was only barely conscious. I heard myself singing, groaning, talking, and the sounds were like hands on my body. Blood boiled, flesh crept, teeth chattered and clenched, my knees came up to my mouth; I lay in an evil swamp of sweat which alternately steamed and froze me. My shirt was a kind of enveloping sky wetly wrapping my goosy skin, and across which, at intervals, hot winds from Africa and Arctic blizzards blew. All objects in the room became molten again, and the pictures repainted themselves; things ran about, changed shape, grew monstrous, or trailed off into limitless distances. The flame of the candle threw shadows like cloaks which made everything vanish in turn, or it drew itself up like an ivory saint, or giggled and collapsed in a ball. I heard voices that couldn't control themselves, that either whispered just out of sound, or suddenly boomed some great echoing word, like "Shovel!" or "Old-men's-ears!" Such a shout would rouse me with terrible echoes, as though a piano had just been kicked by a horse.

It was myself, no doubt, who spoke these words, and the monologue went on for hours. Sometimes I deliberately answered back, but mostly I lay and listened, watching while the room's dark crevices began to smoke their ash-white nightmares.....Such a night of fever slowed everything down as though hot rugs had been stuffed in a clock. I went gliding away under the surface of sleep, like a porpoise in tropic seas, heard the dry house echoing through caves of water, followed caverns through acres of dreams, then emerged after fathoms

and years/.....

and years of experience, of complex lives and deaths, to find that the moon on the window had not moved an inch, that the world was not a minute older.

Between this sleeping and waking I lived ten generations and grew weak on my long careers, but when I surfaced at last from its endless delirium the real world seemed suddenly dear. While I slept it had been washed of fever and sweetened, and now wrapped me like a bell of glass. For a while, refreshed, I heard its faintest sounds: streams running, trees stirring, birds folding their wings, a hill-sheep's cough, a far gate swinging, the breath of a horse in a field. Below me the kitchen made cosy murmurs, footsteps went up the road, a voice said Goodnight, a door creaked and closed - or a boy suddenly hollered, animal clear in the dark, and was answered far off by another. I lay moved to stupidity by these precious sounds as though I'd just got back from the dead. Then the fever returned as it always did, the room began its whisper and dance, the burnt-down candle spat once and shuddered, and I saw its wick fold and go out.....Then darkness hit me, a corroding darkness, a darkness packed like a box, and a row of black lanterns swung down from the ceiling and floated towards me, smiling. And once more I was hammering the bed-rails in terror, screaming loudly for sisters and light.

From "Cider with Rosie"
Laurie Lee

ONE POINT OF VIEW

ARITHMETIC IN A CALCULATOR AGE by Zalman Usiskin
(Professor of Education, University of Chicago).

SCOPE:

Mathematics counts, a detailed report (1982) on mathematics education in England and Wales, recommends that pupils normally use a calculator in place of long division (p.114). I agree, but why stop with long division? Once the calculator is in the classroom, what consistent policy can justify learning partial-product multiplication and other time-consuming algorithms?

NCTM's Agenda for Action (1980) distinguishes difficult from simple computations, recommending "decreased emphasis on such activities as.....performing paper-and-pencil calculations with numbers of more than two digits" (p.7). However, if a calculator is available to do three-digit multiplication, it will naturally be used for the two-digit variety. The distinction would seem difficult to enforce in upper elementary school classrooms.

Some have suggested that manipulations be taught as usual but that calculators be brought in for problem solving. Then what justification is there for having to learn the corresponding skills in the first place?

These and most other recommendations I have seen are not unreasonable, but they are too weak to be workable. They resemble recommending that a car be bought but then allowing it to be driven only on long tips, or to certain places, or at specific times of the day. The calculator, like the car, is too useful for such restrictions.

Sequence and timing:

The sequence and timing of almost all topics in the arithmetic curriculum have been determined by and organized around paper-and-pencil skill requirements. Because the scope is obsolete, so too are these aspects, to a greater extent than most reports have recognized.

For instance/.....

For instance, we carefully sequence addition and subtraction by the numbers of digits in the terms or by the number of renamings ("carries" or "borrows") required by the computation. Yet with calculators, no renaming is needed and, except for numbers with very many digits (and these are usually avoided in current practice), calculators treat multi-digit numbers as easily as single-digit ones. So there is little reason to delay work with large numbers.

We teach division after subtraction and multiplication because the long division algorithm requires these other operations. But, on calculators, a division can be performed as easily as a subtraction or a multiplication.

We teach multiplication of decimals years after multiplication of whole numbers. We don't subtract larger numbers from smaller numbers until seventh or eighth grade. But calculators also make these delays unnecessary; decimals can be dealt with as easily as whole numbers, negatives as easily as positives.

Other Aspects:

The arithmetic curriculum is more than paper-and-pencil algorithms. The pedagogies we use - the ways we develop number and operation ideas with children - have also been largely determined by paper-and-pencil skill requirements, so are due for in-depth analysis and substantial change. The basic (memorized) facts, properties and relationships among numbers and operations, and applications of arithmetic are of greater importance due to calculators.

--- oOo ---

National Council of Teachers of Mathematics.

An Agenda for Action: Recommendations for School Mathematics of the 1980's. Reston: The Council. 1980.

Usiskin, Zalman P. "The Future of Fractions."

Arithmetic Teacher 27 (January 1979): 18-20.

I am not a Christian any more and never shall be again, but I want to say this in all earnest, the best weapon against an evil philosophy is the good philosophy at your immediate disposal, and the only effective weapon South Africa has at the present against the communist menace, is religion. The Christian religion, the Islamic Religion and the Hindu religion as well as the Judaic religion must be brought forward to play a dramatic and positive, as well as visible and creative, role in this country. The fate of South Africa is too important to be left in the hands of strait-jacketed and benighted politicians who see no further than the next election. MEN OF GOD MUST STAND FORTH NOW AND ACT.

The Church must assist the white man to reform, but it must also pressure the black man into reforming too. The black man must accept that he too is responsible for the mess that South Africa is in. He has never been honest with the white man in many ways and has again and again spoken one thing while thinking another. He has, for decades, caused the white man to make serious mistakes in those things that the white man was creating for the black's own benefit, by simply not telling the white man the full truth.

It is a truth known to all who are black, that deep in our hearts of hearts we prefer a one-party state and not a two-party democracy with a governing party and an opposition. We are rabid tribalists at heart, but we tell the world that we are anything but that and that tribalism is an ugly, outdated thing that has no place in the new Africa. Yet, when plum jobs open in our newly-independent country, we see to it that they get filled with members of our particular tribe. The black man has been a racist for decades, but he hides that fact from the world outside and is content to let the Afrikaner alone face the flak.

I cannot, and I will not, allow my country to drown in the flames of war, and I call upon all men who have taken on the mantles of leadership in our country to do their utmost to help prevent such a war from coming to South Africa. I further call upon President PW Botha, Mr Jaap Marais as well as Mr Eugene Terre-Blanche to show wisdom and do likewise or else face the contempt and the harsh judgement of future generations of South Africans.

I wish/..

I wish most especially to say this to Mr Terre'Blanche, leader of the Afrikaner Weerstandsbeweging: Sir, I have warned Oliver Tambo and now I am warning you. Please put away your ridiculous flags and command your stormvolke warriors to go back to their father's farms. This is not the way to serve the interests of the great Afrikaner nation to which you and they belong. All this troglodyte thuggery and Neanderthal violence on the part of your followers is doing incalculable harm to the Afrikaner people at an extremely critical time, and I appeal to you to put an end to it. South Africa, no matter how strong and militarily prepared she may be, would never survive a race-war, NO COUNTRY ON EARTH CAN, NOT EVEN NUCLEAR SUPER POWERS SUCH AS THE UNITED STATES, RUSSIA OR BRITAIN.

South Africa requires moderation and not extremism in these dangerous times, and we have no time for extremism of any sort, whether it comes from the left or from the right. Sir, I love your people, the Afrikaners, and as a child of twelve-years-old I was taught the arts of tanning leather and blacksmithing in the old Dutch tradition by an old Afrikaner, Mr Hennie Swanepoel, and the knowledge I received from that old man enabled me to survive where others would have perished in my long journeys through Africa. It is in his name that I say to you: do not start something that you will not be able to stop.

I beg of you to join hands with others of your nation who are working for peace and reconciliation in South Africa, and I want you to know that you cannot turn the clock of history back, and cannot reconquer the black people just as your forefathers conquered them about a century ago. I say to you, Sir, words that I have said to many other people over the last forty years, that South Africa needs peace and not violence and she needs SALVATION and not CRUCIFIXION.

My words must now draw to an end, and the few that remain are directed towards South Africa herself.

I call upon all politicians and leaders in my country to put South Africa first, and their ambitions second.

THE TRAVELERS AND THE BEAR

Two men were traveling together in a wild and lonely part of the country. Before they had set out on their journey they had promised that if any danger should overtake them they would stand by each other to the death.

They had gone only a short way when a bear rushed out of the bushes and made straight for them. One of the men, quick as a flash, took to a tree and scrambled up into its branches. The other, seeing he had no time to escape, threw himself flat upon the ground, pretending to be dead.

As he lay there in the dust holding his breath the bear came near, sniffing and smelling, and putting his muzzle close to the man's ear. Then, at last, with a growl he shook his head and lumbered away, for bears will not touch a dead body.

When the animal was completely out of sight the man in the tree slid down to the ground, and somewhat shamefacedly approached his companion, who now was sitting on a stone.

"Well, old fellow," he said, "that was a close one, wasn't it? By the way, didn't I see that bear whispering to you? What did he say when he put his mouth to your ear?"

"Why," replied the other, looking his companion straight in the eye, "it was no great secret. He just told me that the next time I should not place any faith in the word of a cowardly knave like you."

THE OAK AND THE REED

A proud oak grew upon the bank of a stream. For a full hundred years it had withstood the buffeting of the winds, but one day there came a violent storm. The great oak fell with a mighty crash into the swollen river and was carried down toward the sea.

Later the oak tree came to rest on the shore where some reeds were growing. The tree was amazed to see the reeds standing upright.

"How ever did you manage to weather that terrible storm?" he asked. "I have stood up against many a storm, but this one was too strong for me."

"That's just it," replied the reed, "All these years you have stubbornly pitted your great strength against the wind. You were too proud to yield a little. I, on the other hand, knowing my weakness, just bend and let the wind blow over me without trying to resist it. The harder the wind blows the more I humble myself, so here I am!"

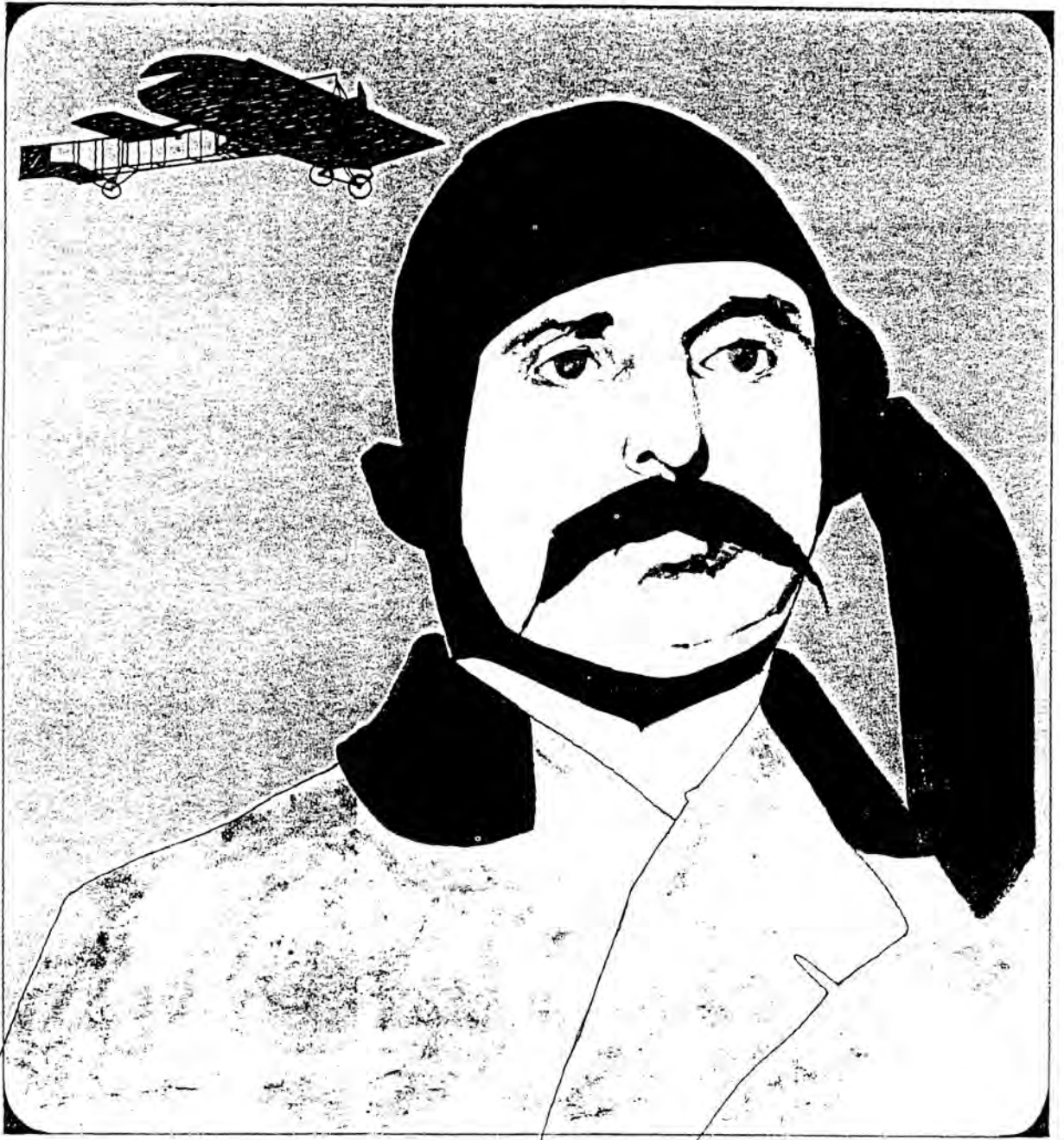
--- oOo ---

APPENDIX XIV

SAMPLE INSTRUCTIONAL MATERIAL FROM SRA READING LABORATORIES
IIc, IIIb AND IVa.

Flying for a Prize ^{I81}

by Michael Pollard



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- ¹ The plane was made of stiff cloth and bits of wire. The engine was small. Louis Blériot had built the plane. He was going to try to fly the English Channel in it.
 - ² From Calais in France across the English Channel to Dover is less than twenty miles. Lots of planes now fly it every day. But in 1909 no one had crossed it in a plane, though it had been crossed in a balloon.
 - ³ More than five years had passed since the Wright brothers had made the first plane flight. People were as interested in air flights then as they are in space flights now.
 - ⁴ Louis Blériot heard that a London paper was offering a big prize to the first man to fly the English Channel. He wanted to win that prize.
 - ⁵ The day of the flight came. Blériot started his engine and got into his plane. It bumped down the field. Then it stopped. Blériot got out. He looked at the engine. He got in and tried again. Once more, the plane moved off and stopped. On the third attempt it took off.
 - ⁶ Blériot's plane did not fly as high as planes do now. It flew just a few feet above the sea. Blériot sat between the wings. If he hit a patch of bumpy air, he could fall out of his seat and drown. There was no radio. Once he was out of sight, no one knew where he was.
 - ⁷ In those days plane engines became too hot if they ran for long. Then they would break down. Soon after Blériot took off, he met a rainstorm. The cold rain kept his engine cool all the time.
 - ⁸ In Dover, on the English side of the Channel, a crowd met to wait for the plane. At last they saw a speck in the distance. Then they heard the buzz of the engine.
 - ⁹ The rain had stopped. Blériot was near the end of his trip. But the Dover cliffs were high. His plane could not fly high enough to go over them. If he tried to land on the beach, he would crash.
 - ¹⁰ Then he saw a gap in the cliffs. He flew through it. He brought his plane down in a field. Men ran to the spot. They helped him out.
 - ¹¹ Louis Blériot had done it. He was the first man to fly a plane across the English Channel. He had won the prize — one thousand pounds, or almost five thousand dollars!
-

How Well Did You Read?

Do you remember the facts?

- 1 Blériot's flight took him from
 - A Calais to Dover
 - B Dover to Calais
 - C London to Calais
- 2 The plane's engine was kept cool by a
 - A heavy snow
 - B strong wind
 - C cold rain
- 3 Louis Blériot was the first man to fly a plane
 - A without a radio
 - B across the English Channel
 - C over water

Do you remember why?

- 4 Blériot did not keep in touch with people on the ground because
 - A his radio was broken
 - B he had no radio
 - C he did not want to
- 5 Blériot flew his plane through a gap in the cliffs because the
 - A engine was getting hot
 - B plane could not fly over them
 - C fuel supply was low

Learn About Words

- A You can often tell the meaning of a word by reading the words around it.

Directions: Find the word in the paragraph that best fits the meaning below. Write the word.

- 1 try; effort (5)
- 2 rough; not smooth (6)
- 3 group of people (8)
- 4 spot; tiny bit (8)
- 5 hole; opening (10)

- B One good way to learn words is to use them.

Directions: Read the first sentence below. Look back at the paragraph and find the word that best fits the sentence. Write the word. Do the same for the other sentences.

- 6 Before planes were made, people went up in the air in a _____. (2)
- 7 Alan Shepard was the first American to travel in _____. (3)
- 8 He saw a _____ of light under the door. (6)
- 9 Climbing steep _____ is very difficult. (9)
- 10 Golden sand covered the _____. (9)

C bat red bit top bus
candy penny little bottle tunnel

The letters *a*, *e*, *i*, *o*, and *u* are vowels. When one vowel is in the middle of a word or accented syllable, the vowel usually has a short sound. (In the examples, the accented syllable is underlined.)

Directions: Look at each word or accented syllable. If the vowel has a short sound, write *yes*. If it does not, write *no*.

- 11 cactus
- 12 bone
- 13 meet
- 14 yellow
- 15 stupid
- 16 cut
- 17 mister
- 18 pop

D bought lonely
 brought lovely

Some words look much alike. You should learn to tell them apart.

Directions: Look at each pair of words. Decide which word fits the sentence. Write the word.

- 19 The dog broke Lucy's favorite _____. (lamb, lamp)
- 20 They roasted a _____ at the picnic. (lamb, lamp)
- 21 Green _____ covered the ground and trees. (moth, moss)
- 22 A _____ flew through my window. (moth, moss)

- 23 Rain poured down for one whole _____. (week, weak)
- 24 The scouts were _____ with hunger. (week, weak)
- 25 The town was _____ than they thought. (father, farther)
- 26 His _____ was a lawyer. (father, farther)

E eat + **ing** = eating
 talk + **ed** = talked

A verb is a word that expresses an action. The ending *ed* or *ing* is often added to verbs.

Directions: In each sentence below there is a word that ends in *ed* or *ing*. If the *ed* or *ing* is an ending added to a verb, write *yes*. If the *ed* or *ing* is not added to a verb, write *no*.

- 27 Black Jack made a leap for his steed.
- 28 Jane was helping in the kitchen.
- 29 Hold the package while I get some string.
- 30 We saw them standing on the corner.
- 31 I waited a long time for the bus.
- 32 Put that horse in the shed!
- 33 If you give me my ring, I'll give you the will.

What's Your Story?

Do you know about any other people who have made famous flights? Write a story about one of them.



THE LAND OF LAPPS AND REINDEER

NORTH OF THE ARCTIC CIRCLE

by *Erick Berry*

- ¹ The land of the Lapps stretches eastward from Finland into Russia, and westward across the top of Sweden into Norway. In this interesting corner of the world, the Lapps follow a way of life that was old and traditional long before any of these four countries existed.
- ² The origin of the Lapps and their strange Stone Age culture is lost to history. It is known only that they came from Asia many centuries ago and that they were driven north by the Finns.
- ³ But even before the Lapps moved into their wild northland there were reindeer grazing there. The Lapps are completely dependent on these reindeer, and the deer in turn are dependent on sparse reindeer moss that makes up almost all their diet. Where the reindeer go to graze, the Lapps must follow, year after year; settled villages are almost unusable except for brief periods during the dark winter months. A family of five needs two thousand deer for the bare necessities of life; and such a herd may need up to two hundred square miles of grazing land.
- ⁴ The Lapps, who call themselves Samieds, are short—hardly more than five feet tall—and have pleasant, alert features. They are sturdy and courageous; only the fittest survive their rugged life, which is as specialized, as untouched by modern civilization as any on earth.

*From The Land and People of Finland, by Erick Berry.
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⁵ As hardy as their masters are the reindeer that roam the frozen wasteland. Both male and female have horns—great branching antlers which they shed once a year. These, along with the reindeers' shovellike hoofs, are most useful for digging through deep snow to the moss beneath. A deer can sniff the moss through a three-foot fall of snow, and can shovel through to reach it. During the winter, when the deer cluster round the winter cabins of the Lapps, they plow pathways in the snow so deep that only the tips of their horns can be seen.



⁶ As the snow begins to melt in the spring, the winter Lapp village is a busy place, for as soon as the crust forms on the snow the deer will be off on their annual stampede to the high mountain meadows. There the does will bear calves. And there the whole herd will be rid at last of the insects that, with the warmer weather, annoy them constantly. In the turf-and-log houses blankets are rolled, the oval birchbark boxes are packed, and household pots and pans are made ready. The sleds, ready to hitch, stand beside the doors. Reindeer, selected and trained for strength and gentleness, are rounded up and confined in the corral; they will be used for carrying packs and pulling sleds.

⁷ Suddenly one morning the night's frost has formed a crust on the snow: the deer are off, and the herders race breathlessly behind them. With wild yells and much barking of dogs, the men channel the herd, which may string out for all of ten miles. Behind them, amid a flurry of snow and the jangle of bells, come the women and children in the lurching, bumping reindeer sleds. Here too it is a game of follow-the-leader, for the

animal at the leading sled is trained and old and wise, the strongest deer of the herd. He wears a bell on his bright red-and-yellow collar; a single rein attached to the base of his horn leads back to the small, canoe-shaped wooden sled. He is guided by the rein, and the sled is partly steered by the driver's heavily booted feet dragging in the snow. Behind the leader follow the other migrants: children on deer back and older folk in sleds. Each deer is fastened to the sled or the deer ahead.

⁸ There is little rest on this trip northward—perhaps a half hour halt for a small fire and coffee—for now that the herd has started, there is no stopping them. The herdsmen on skis, each with a dog or two at his heels, keep the reindeer together.

⁹ The mountain meadows are reached—the camping place of many summers before, with hearthstones waiting as they have for generations. The herds, insect free, spread out to graze. Here at last is the true mountain country for which the Lapps, as well as their deer, have yearned all winter.

¹⁰ The camp is quickly set up; it is made up of a small group of *kata*, large wigwamlike tents erected around the permanent hearthstones. The poles, brought here to this treeless country on deer back, fit closely together. Around them are hitched two long cloths of sacking; a third covers the entrance. Beside the hearthstone are neatly arranged the few simple cookpots and the copper kettle for making salted coffee, which the Lapp drinks in quantities.

¹¹ The main food is reindeer meat, made into stew with potatoes and barley meal. All cooking is done over an open fire. Cakes of barley meal are half baked on the hot stones, then turned to toast in the glow of the fire. Berries, and cheese made from reindeer milk, add variety to the simple diet. Reindeer milk is rarely used in coffee, for the deer are difficult to milk; besides, the calves need it more than the humans do.

¹² Through the short summer, the reindeer browse day and night; life moves slowly. But as time goes on, there is increasing darkness, the sun sinking for longer and longer periods below the horizon. This is a warning that the herds must be rounded up and strays from other herds sorted out. With autumn come heavy snows and

high winds; then one morning the crust has formed, and it is time to travel south again.

¹³ The Laplanders' home is harsh, bitter country; its inhabitants, like gypsies, must be ever on the move. They learn no arts, practice no crafts, grow hardly any crops. They take their orders from the reindeer, as the reindeer take orders from the moss, and the moss from the climate. Few but the hardy Laplanders could accept such grim conditions—and meet them so successfully.

HOW WELL DID YOU READ?

Do you remember the time order?

1. Reindeer probably began making their annual trips
 - A before the Lapps came to the northland
 - B when the Lapp culture originated
 - C after the Lapps were driven north
2. The reindeer herd begins to move when the snow has
 - A melted completely
 - B begun to fall
 - C formed a hard crust
3. The Lapps leave their cabins in
 - A winter
 - B spring
 - C fall

How carefully did you read?

4. The strongest deer of the herd is used to
 - A start the stampede
 - B round up strays
 - C pull the lead sled
5. The trip northward is hectic because the villagers
 - A drive their herds as fast as possible
 - B must keep up with their herds
 - C often cannot keep the herd together

6. To their mountain camps the Lapps must carry

- A tent poles
- B hearthstones
- C most of their food

7. In the mountains the reindeer

- A bear their young
- B suffer from insects
- C struggle for food

Do you remember why?

8. Reindeer milk is rarely used for coffee because the reindeer
 - A do not give much milk
 - B give poor-quality milk
 - C are difficult to milk

Did you grasp the central idea?

9. In order to survive in their harsh land, the Lapps must be
 - A quick to learn and change
 - B ambitious and strong willed
 - C skillful at following old ways

LEARN ABOUT WORDS

A. Often you can tell the meaning of a word by reading the words around it. This is called getting the meaning from context.

Directions: Find the word in the paragraph that means

1. customary (1)
2. thinly spread (3)
3. strong; robust (5)
4. gather in a bunch (5)
5. occurring every year (6)
6. longed (9)
7. graze (12)
8. skilled jobs (13)

B. A word may have more than one meaning. Its meaning depends on the way it is used.

Directions: Read the three meanings for each word. Look back to the paragraph to see how the word is used in the story. Write the letter that stands before the correct meaning.

9. bare (3)

- A revealed
- B empty
- C mere

10. features (7)

- A traits; characteristics
- B facial appearances
- C special attractions

11. bear (6)

- A carry
- B tolerate
- C give birth to

12. covers (10)

- A hides
- B extends over
- C deals with

13. crops (13)

- A whips
- B cuts
- C food plants

C. oi - oy

ou - ow
au - aw

ic - ci

eu - ew

These letter combinations are often pronounced together in a special sound. Then they cannot be separated when words are divided into syllables.

Directions: Write each word and draw a line between the syllables.

14. coward

15. toiler

16. cloudless

17. clawing

18. conceive

19. bounty

20. pneumatic

D. The prefixes *de-* and *ex-* have many meanings.

de = away; from; down; off; very; wholly; reverse of; undo

ex = out; out of; forth; from; beyond; away; from upward; without

Directions: Add either *de-* or *ex-* to each word part to make a word that will fit the definition given. Write the whole word.

21. ___pression (low spirits)

22. ___tend (reach beyond)

23. ___part (go away)

24. ___fer (put off)

25. ___clude (keep out)

26. ___ception (something outside the rule)

E. Often two words are joined together to form one word. Words made in this way are called compound words.

paint + brush = paintbrush

Directions: Make each word in column I into a compound word by joining it with a word in column II. Write the compound word.

I

II

27. spear

ache

28. tooth

book

29. tree

coast

30. boat

light

31. lime

load

32. note

top

33. sea

head



POWER POLITICS

by Martin Wight

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- 1 The Charter for . . . the United Nations, which was drafted at Dumbarton Oaks in 1944 and completed at San Francisco in 1945, is an attempt to marry the League system with the system of the great power directorate. In its external characteristics — its Security Council and General Assembly — it is clearly the child of the League, and has improvements which are the fruit of League experience. . . . But in other respects more has been taken out of the League than has been put into it, and it is clear that the United Nations is an organization of a different kind.
- 2 The first contrast is in the subordination of the small powers to the great powers. . . . The second contrast is in the subordination of world organization to regional organizations. . . .
- 3 The true parentage of the United Nations is thus, not the League, but the Concert of Europe. The great powers will impose the law, but are themselves above it. The emphasis of the Charter is on the maintenance of security, that ambiguous word, not on justice or a rule of law. And it is founded to a far greater extent than was

the League on the assumption that the only threats to security will come from the defeated enemy. It is unlikely that Germany and Japan are going to be able a second time to confuse and divide the victor powers by a clamour for "revision." But the main lesson of the League's failure, that the victor powers, if they are to remain united, need to accept a rule of law themselves, is less clearly apparent in the organization of the United Nations.

- 4 In the study of international politics we are dogged by the insistent problem, whether the relations between powers are in fact more than "power politics" in the popular sense of the term, and whether they can become more. From one point of view, the central question is how far powers can be said to have interests in common. We have seen that the international anarchy is restrained and to some extent systematized in practice by two opposing kinds of common interest, pulling alternately to and fro. The first is the common interest of all powers in their freedom, of which they are faintly conscious in peace, and assert at the eleventh hour in war by an armed coalition against a common danger. The second is the kind of common interest represented by successive dominant powers; for their predominance has generally safeguarded real values, and offered real benefits for other nations, and sometimes they have wielded an international ideology as their most potent weapon — as the Hapsburg powers were the protagonists of the Counter Reformation, as Napoleonic France was the carrier of the French Revolution throughout feudal Europe, as Britain in the nineteenth century was the champion of liberalism. In the same way, Russia in the twentieth century has represented the ideal of socialism. A dominant power that is thus able to give its policies the added momentum of an international ideal becomes a tremendous force, whose limits are reached only if it provokes counterinterest of general freedom. Nor is it impossible that powers may henceforward increasingly regard their deepest common interest as being the prevention of war and liberation from anarchy, and that this will only prove obtainable by acquiescence in a common government provided by the strongest power.

- 5 But the idea of common interest can never have much vitality if it is separated from the idea of common obligation, and here we touch a more fundamental issue. There has always existed a theory of international relations which asserts the primacy of common conceptions of justice, right, and law. There was an ancient tradition, dating back through the jurists and theologians of the Middle Ages to the jurists and philosophers of antiquity, of natural law or the law of nature. It taught that man is a rational and social animal, that there is a moral order in the universe to which his rational nature bids him always and everywhere to conform, that the true interests of human societies therefore do not conflict, and that they are bound together by obligations of law and morality. This tradition was the source of international law, which developed in the seventeenth century to restrain the anarchy into which the states of Europe had fallen, and which used to appeal to "the common standard of right prevailing throughout the Christian world." But it was eclipsed by the new revolutionary creed of progress at the end of the eighteenth century, just at the time when the European powers, as a con-

sequence of industrial revolutions, were beginning to establish a material unification of the world.

6 The expansion of Europe itself weakened the tradition of natural law by admitting states that had not been schooled in it to the international community. Of the two new great powers of the eighteenth century, Prussia was at the extreme limit of Western Christendom, and had been in many ways scarcely touched by its characteristic culture; and Russia is the heir and champion of the very different traditions of Byzantine Christendom. In the nineteenth century international intercourse was extended far beyond the Christian world at the same time that Christian political theory was at a greater discount inside the Christian world than it had ever been before. In 1856, at the conclusion of the Crimean War, Turkey was admitted for the first time to the community of nations; but it was a passive and not an active member; and it was from the emergence of Japan as a great power — the first great power that was wholly non-European and non-Christian in its traditions — that we may date the effective transformation of the international community from one based on a common ethos to one whose principle is inclusiveness. Attempts have been made since the French Revolution to find an alternative common ethos in political creed instead of moral tradition. The Vienna settlement was based on the principle of legitimacy; the Versailles settlement was based on the principle of self-determination; the Yalta declaration of 1945 enshrined the principle of "democracy." But in each case these formulae have reflected only a transient moment on the surface of affairs, concealing differences rather than expressing "a common standard of right," and they have soon dissolved and been superseded. It may indeed be asked whether an effective common ethos is likely to grow up again without an effective common government.

7 Though the tradition of an international community with a common standard of obligation and justice has faded, however, it has not altogether disappeared. It is the main influence that has modified, and can yet modify, the operations of power politics, and it still gleams faintly in the preamble to the Charter of the United Nations. In countries whose culture and politics are favorable to its survival, it can create a "moral climate" of opinion that will affect politicians who are quite ignorant of any traditional political theories. The extent to which it may do so in practice is highly controversial, and every historical example that may be brought forward in this light will lead to the kind of argument in which there can be no clean-cut and final conclusion, because it depends not on the establishment of facts but on the exercise of moral insight and political judgment.

8 It is sufficient to instance two statesmen whose beliefs were saturated with conceptions of natural law and whose politics were grounded on its traditions, Gladstone in nineteenth-century England, and Franklin Roosevelt in twentieth-century America; nor is it any accident that each of these men in his generation had a moral ascendancy and a power over the public opinion of the world, evoking a trust and loyalty far beyond his own country, which was unapproached by any other contemporary figure. (The devotion inspired abroad in the intervening generation by the supreme revolutionary

statesman, Lenin, was perhaps more passionate in its quality, but it was limited and sectional by comparison in its range.) This is not to say that Gladstone and Roosevelt were not assiduous, subtle, and farsighted power-politicians. But their politics had overtones that are absent from the politics of a Theodore Roosevelt or a Cecil Rhodes, a Lloyd George or a Clemenceau, a Bismarck or a Cavour. When we consider the foreign policies of the latter, we think in terms of patriotism, of grandeur of conception, of brilliance, of virtuosity, and above all, of success or failure. Most people would agree that Gladstone's Irish policy or Roosevelt's Latin-American policy (like, in another way, Lincoln's Civil War policy) were different in quality from these, the fruit of a richer conception of politics, which made power an instrument and not an end, and subordinated national interest to public justice.

9 Nevertheless it is always well to be sceptical of statesmen, and as Lord Acton insisted, to "suspect power more than vice." It is particularly necessary to guard against the notion that morality in politics is a flower that blooms especially or exclusively in Anglo-Saxon gardens. The first thing to remember about the policies of Gladstone and Franklin Roosevelt is that Gladstone's Britain and Roosevelt's America were dominant powers. This will remind us of the great truth that morality in international politics is not simply a matter of civilized tradition but is equally the result of security. If British policy in the nineteenth century showed in general perhaps a greater degree of enlightened self-interest than that of any other great power in modern history, it was because Britain then enjoyed perfect security. "We could afford the luxury of gentleness," as Mr. Harold Nicolson has said, "because we were completely unafraid."

10 Once security is destroyed, all the higher objects of politics are swallowed up in the struggle for self-preservation, a tendency seen in every war. "A great and civilized power like England," said a distinguished writer before the war, "should strive for a margin of security big enough to make a certain bias in favor of an ideal policy possible, a bias that may never show itself in any specific political action but will inform the manner or spirit of her international conduct." Yet since it ceased to be a dominant power, Britain's margin of security has shrunk, and the possibility of an independent ideal policy has correspondingly dwindled. This is the vicious circle of power politics: Morality is the fruit of security, but lasting security as between many powers depends on their observing a certain common standard of morality. The League of Nations in theory transformed it into a virtuous circle, by making collective security a moral obligation. But the solution presupposed a degree of enlightened self-interest among the great powers that did not exist.

11 The modern substitute for the law of nature might be called the law of common material interest. Contemporary writers on international politics are increasingly driven to place their hopes for future peace on the universal demand for social justice and a rising standard of living, which implies the growth of new economic and social relationships between peoples, and cooperation between powers "for the planned development of the economies of geographical areas and groups of nations." The reality of this common interest is profound, but it does not touch the problem of power. The world com-

munity is still an anarchy, lacking a common superior, and international politics are still power politics. Every nation has an interest greater than welfare, an interest on which it believes that welfare depends and to which welfare must in the last resort be sacrificed — the maintenance of power itself.

- 12 It is equally true that there was anarchy in the period when men talked in terms of the law of nature, so that its influence upon politics was tenuous and remote. Yet in the long run the idea of a common moral obligation is probably a more fruitful social doctrine than the idea of a common material interest. As the French philosopher Julien Benda has said, mankind has always betrayed its

obligations, but so long as it continues to acknowledge and believe in them, the crack is kept open through which civilization can creep. Powers will continue to seek security without reference to justice, and to pursue their vital interests irrespective of common interests, but in the fraction that they may be deflected lies the difference between the jungle and the traditions of Europe. The outstanding contrast between the mood of 1945 and the mood of 1918, which is reflected in the contrast between the United Nations Charter and the League Covenant, is the absence of optimism, the greater realism. Realism can be a very good thing; it all depends whether it means the abandonment of high ideals or of foolish expectations.

HOW WELL DID YOU READ?

Did you note important facts?

- The main lesson of the League's failure is, according to the writer, that the victor powers need to
 - subordinate world to regional organization
 - be considered above the law
 - accept a rule of law
 - maintain security apart from law and justice
 - realize that threats to security come only from a defeated enemy
- The principal contrast between the mood of 1945 and the mood of 1918 is the former's
 - greater optimism
 - greater idealism
 - more foolish expectations
 - greater moral obligations
 - greater realism
- Once security is destroyed, all the higher objects of politics are swallowed up in
 - the struggle for self-preservation
 - a cataclysmic war
 - enlightened self-interest
 - the common moral standard
 - an independent ideal policy
- The expansion of Europe
 - championed the tradition of Byzantine Christendom
 - sponsored the emergence of Japan as a great power
 - fostered a common ethos
 - weakened the tradition of natural law
 - destroyed the principle of inclusiveness

How exact was your reading?

- According to the writer, the true parentage of the United Nations is the
 - League of Nations
 - Entente Cordiale
 - natural law
 - Yalta declaration
 - Concert of Europe

- Morality is the fruit of security, but lasting security depends on a common standard of morality; the author calls this the
 - crack through which civilization can creep
 - vicious circle of power politics
 - possible basis for an independent ideal policy
 - tradition of an international community
 - main lesson of the League's failure

- The idea of common interest in order to have vitality must be linked with the idea of
 - socialism
 - common obligation
 - self-determination
 - power politics
 - Anglo-Saxon genius

Judge the writer's purpose.

- The tone of the article is best described as
 - paradoxical
 - expository
 - patronizing
 - imagistic
 - satirical

- The writer believes that the idea of common moral obligation as contrasted with the idea of common material interest is
 - more fruitful
 - more idealistic
 - less fruitful
 - less idealistic
 - more pragmatic

- Which of the following does the writer imply in his last sentence?
 - Realism is bad only if foolish expectations aren't abandoned.
 - Realism is bad only if high ideals aren't abandoned.
 - Realism is good if high ideals are equated with foolish expectations.
 - Realism is good if high ideals are acknowledged, believed, and fostered.
 - Realism is good only if it fosters social justice and a rising living standard.

VOCABULARY BUILDING

A. Context

Often you can determine the meaning of a word from its context — the complete sentence or paragraph in which the word appears.

Directions: Find a word in the selection which means:

1. uncertain in meaning (3)
2. temporary union of countries (4)
3. superiority (4)
4. characteristic ideas of a group (4)
5. political disorder (5)
6. spirit which actuates moral attitudes, practices, and ideals (6)
7. introductory statement (7)
8. constant; unremitting (8)
9. slight; unsubstantial (12)
10. independent (12)

B. Semantic Variations

A word may have more than one meaning. We call these differences in meaning "semantic variations."

Directions: For each italicized word, decide which semantic variation best conveys the meaning of the author. Write the appropriate letter.

11. *subordination* (2)
 - A. placing in an inferior position
 - B. secondary in importance
 - C. submission
12. *protagonists* (4)
 - A. participants in an event
 - B. leading parts in a story
 - C. principal actors in a drama
13. *superseded* (6)
 - A. supplanted in office
 - B. set aside as useless
 - C. replaced in effectiveness
14. *saturated* (8)
 - A. free from any whiteness
 - B. completely filled with
 - C. brought to 100 per cent humidity
15. *overtones* (8)
 - A. higher tonal frequencies
 - B. richness of connotations
 - C. colors of light reflected
16. *bias* (10)
 - A. preconceived opinion
 - B. diagonal line of direction
 - C. direct grid voltage of an electronic tube

C. Roots

The Latin roots *sens* and *sent* meaning "sense" or "feeling" are elements in a number of English words.

Directions: Column II lists English words containing *sens* or *sent*. Write the words that match the meanings in Column I.

I	II
17. without feeling	sensation
18. a reaction to an external stimulus	presentiment
19. using pithy sayings	sentient
20. expressive of tender emotion	sententious
21. perceiving by the senses	insensible
22. lacking in sense, absurd	sentimental
23. a feeling that something will happen	nonsensical

D. Prefixes

iso — same or equal

This prefix coming from the Greek word *isos*, which means "equal," "similar," or "alike," is combined with other word elements to make many of our scientific terms.

Directions: Column II lists word elements with which *iso* is often combined. Column I lists meanings of finished words. Combine *iso* with the proper elements to match each meaning in Column I.

I	II
24. line joining the same mean temperatures	therm
25. line joining the same barometric pressures	chroous
26. having equal tones, or tension	bar
27. governmental system granting equal power to all	cracy
28. imitating another person's handwriting	tonic
29. equal in time	graphy
30. having same color throughout	chronal

E. Idioms

For many English idioms, we often can substitute a word or two when we want to speak or write on a more formal level of language: for example, "find fault with" means "blame."

Directions: For the italicized expressions in the sentences in Column I, find a one- or two-word equivalent in Column II and write the appropriate letter.

I	II
31. After his severe illness, the President was <i>on the road</i> toward complete recovery.	A. mostly, chiefly
32. Hiss's diffident personality kept his friends at <i>arm's length</i> .	B. unusual, unfamiliar, original
33. The coed finally <i>brought him around</i> to ask for a date.	C. a distance
34. His conclusions are <i>in the main</i> indisputable.	D. convinced him, persuaded him
35. His illustrations were <i>off the beaten track</i> .	E. proceeding, progressing

APPENDIX XV**Repeated Measures Analysis of Variance****Tables 4.1 to 4.10**

Source of Variation	Sum of Squares	Degrees of freedom	Mean Square
Grand Average	1062.0192	1	1062.0192
Between Rows	88.730769	12	7.3942308
Within Rows	154.25000	39	3.9551282
Treatment	54.211538	3	18.070513
Residual	100.03846	36	2.7788462
Total	1305.0000	52	

$$F = 6.50$$

$$\text{One-tailed } p = 0.001$$

Graph A: Test 2,3 & 2a, 3a

Table 4.1 Repeated Measures Analysis of Variance for
Graph A, Tests 2 and 3 (May and September 1987)

Source of Variation	Sum of Squares	Degrees of freedom	Mean Square
Grand Average	1102.5000	1	1102.5000
Between Rows	69.000000	9	7.6666667
Within Rows	164.50000	30	5.4833333
Treatment	24.100000	3	8.0333333
Residual	140.40000	27	5.2000000
Total	1336.0000	40	

$$F = 1.54$$

$$\text{One-tailed } p = 0.23$$

Graph C: Test 1,2 & 1c, 2c

Table 4.2 Repeated Measures Analysis of Variance for
Graph C, Tests 1 and 2 (January and May 1987)

Source of Variation	Sum of Squares	Degrees of freedom	Mean Square
Grand Average	939.25000	1	939.25000
Between Rows	71.500000	12	5.9583333
Within Rows	174.25000	39	4.4679487
Treatment	33.750000	3	11.250000
Residual	140.50000	36	3.9027778
Total	1185.0000	52	

$$F = 2.88$$

$$\text{One-tailed } p = 0.049$$

Graph A: Test 1,2 & 1a, 2a

Table 4.3 Repeated Measures Analysis of Variance for
Graph A, Tests 1 and 2 (January and May 1987)

Source of Variation	Sum of Squares	Degrees of freedom	Mean Square
Grand Average	1040.4000	1	1040.4000
Between Rows	65.100000	9	7.2333333
Within Rows	158.50000	30	5.2833333
Treatment	13.000000	3	4.3333333
Residual	145.50000	27	5.3888889
Total	1264.0000	40	

$$F = 0.804$$

$$\text{One-tailed } p = 0.50$$

Graph C: Test 2,3 & 2c, 3c

Table 4.4 Repeated Measures Analysis of Variance for
Graph C, Tests 2 and 3 (May and September 1987)

Source of Variation	Sum of Squares	Degrees of freedom	Mean Square
Grand Average	2576.0250	1	2576.0250
Between Rows	13.725000	9	1.5250000
Within Rows	45.250000	30	1.5083333
Treatment	16.475000	3	5.4916667
Residual	28.775000	27	1.0657407
Total	2635.0000	40	

$$F = 5.15$$

$$\text{One-tailed } p = 0.006$$

Graph B: Test 1,2 & 1b, 2b

Table 4.5 Repeated Measures Analysis of Variance for
Graph B, Tests 1 and 2 (January and May 1987)

Source of Variation	Sum of Squares	Degrees of freedom	Mean Square
Grand Average	2380.0833	1	2380.0833
Between Rows	61.416667	11	5.5833333
Within Rows	118.50000	36	3.2916667
Treatment	12.750000	3	4.2500000
Residual	105.75000	33	3.2045455
Total	2560.0000	48	

$$F = 1.33$$

$$\text{One-tailed } p = 0.28$$

Graph D: Test 2 = May 1987

Test 3 = September 1987

Table 4.6 Repeated Measures Analysis of Variance for
Graph D, Tests 2 and 3 (May and September 1987)

Source of Variation	Sum of Squares	Degrees of freedom	Mean Square
Grand Average	2747.7692	1	2747.7692
Between Rows	121.73077	12	10.144231
Within Rows	154.50000	39	3.9615385
Treatment	27.307692	3	9.1025641
Residual	127.19231	36	3.5331197
Total	3024.0000	52	

$$F = 2.57$$

$$\text{One-tailed } p = 0.07$$

Graph D: Test 1-1d, 2-2d

Table 4.7 Repeated Measures Analysis of Variance for
Graph D, Tests 1 and 2 (January and May 1987)

Source of Variation	Sum of Squares	Degrees of freedom	Mean Square
Grand Average	1716.1000	1	1716.1000
Between Rows	26.400000	9	2.9333333
Within Rows	109.50000	30	3.6500000
Treatment	42.500000	3	14.166667
Residual	67.000000	27	2.4814815
Total	1852.0000	40	

$$F = 5.71$$

$$\text{One-tailed } p = 0.004$$

Graph B: Test 2,3 & 2b, 3b

Table 4.8 Repeated Measures Analysis of Variance for
Graph B, Tests 2 and 3 (May and September 1987)

Source of Variation	Sum of Squares	Degrees of freedom	Mean Square
Grand Average	1154.3269	1	1154.3269
Between Rows	129.42308	12	10.785256
Within Rows	107.25000	39	2.7500000
Treatment	18.826923	3	6.2756410
Residual	88.423077	36	2.4561966
Total	1391.0000	52	

$$F = 2.56$$

$$\text{One-tailed } p = 0.07$$

Graph A: Test 3,4 3a 4a.

Table 4.9 Repeated Measures Analysis of Variance for Graph A, Tests 3 and 4 (September 1987 and September 1988)

t3t4

Source of Variation	Sum of Squares	Degrees of freedom	Mean Square
Grand Average	2625.5208	1	2625.5208
Between Rows	39.229167	11	3.5662879
Within Rows	138.25000	36	3.8402778
Treatment	13.729167	3	4.5763889
Residual	124.52083	33	3.7733586
Total	2803.0000	48	

$$F = 1.21$$

$$\text{One-tailed } p = 0.32$$

Table 4.10 Repeated Measures Analysis of Variance for
Graph D, Tests 3 and 4 (September 1987 and
September 1988)

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