

**THE EFFECT OF SEMANTIC MAPPING ON ESL READING  
COMPREHENSION**

by

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**To my children, Karabo and Lerato, with all my love**

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## **SUMMARY**

According to researchers, reading is one of the most important aspects of learning. However, it has also proven to be the most complex and therefore the most difficult to practice and teach. It is due to this reason that many reading strategies have been proposed by both researchers and educators in an attempt to help readers, especially ESL learners who are faced with an extra burden of an unfamiliar language. However, some of these strategies are said to be more effective than others. It is because of this that this study attempts to establish the effectiveness of semantic mapping as a reading strategy.

The methodology employed in this study was discussed under four headings: subjects, instrumentation, data collection procedure and design and analysis. A total number of Black first year students at the Bophuthatswana Nursing College taking Special English were included in this study.

The results indicate the superiority of the experimental group when compared to the control groups after completion of the experiment. This implies that semantic mapping is an effective memory strategy which can help improve students' ESL reading comprehension ability.

**Keywords:** Semantic maps; graphics; schema theory; reading; psycholinguistic models of reading.

## OPSOMMING

Navorsers voer aan dat lees een van die belangrikste aspekte van leer is. Dit is egter ook waar dat dit een van die mees komplekse is, en dus die moeilikste om uit te voer en te onderrig. Dit is om hierdie rede dat baie leesstrategieë al deur navorsers en opvoeders voorgestel is in 'n poging om lesers (en dan veral vreemdetaallesers) te help - dié leerders wat gekonfronteer is met die ekstra las van 'n onbekende taal. Party van hierdie strategieë is meer effektief as ander, en dis om hierdie rede dat my studie probeer om die effektiwiteit van semantiese netwerking as 'n leesstrategie vas te stel.

Die metodologie wat in hierdie studie gebruik word is onder vier opskrifte bespreek, naamlik proefpersone, instrumentasie, inligtingversamelingsprosedure en ontwerp, en ontleding. 'n Totale aantal Swart eerstejaarstudente van die Bophuthatswana Verpleegkollege wat Spesiale Engels neem is in die studie ingesluit.

Die resultate dui aan dat die eksperimentele groep beter gevaar het as die kontrolegroep na afloop van die eksperiment. Dit wil dus voorkom of semantiese netwerking 'n effektiewe geheuestrategie is wat studente kan help om hulle Engelse Tweedetaallesbegrip te verbeter.

Sleutelwoorde: Semantiese netwerke; grafika; skemateorie; lees; psigolinguistiese leesmodelle.

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Statement of the problem**

One of the most important activities, if not the most important one in tertiary education, is reading; reading not merely for pleasure or relaxation but reading actively for purposes of obtaining information or documentary material that has been researched, organized and documented in accordance with the rules of academic discourse. Students at the College of Nursing in Mmabatho, where the researcher has been involved in teaching, experience problems with regard to various aspects of academic reading, for example, identifying main ideas and supporting details in a passage. The reading activity is a complex psycholinguistic task, therefore teachers need to focus on strategies which can help improve the academic reading abilities of their students.

The current explosion of research in second language reading has begun to focus on, among other things, readers' strategies employed in the process of reading. In the same way that an investigation of speakers' communicative strategies reveals the ways in which speakers manage oral communication, comprehension, input, and thus, ultimately, acquisition (Faerch & Kasper, 1983; Wenden & Rubin, 1987), reading strategies are of interest for what they reveal about the way in which readers manage their interactions with written text, and how these strategies are related to reading comprehension.

Strategy research (cf. Hosenfeld, 1977; Block, 1986) suggests that less competent learners are able to improve their skills through training in strategies evidenced by more successful learners. The same is true of reading strategies: less competent readers are able to improve through training in strategies evidenced by more successful readers. Relevant research on strategy training has been conducted in first language reading by Brown and Palincsar (1982), among others. With only a few exceptions (O'Malley, 1987; Carrell, 1985), relatively little strategy training research has been done in a second language context, or more specifically, in second language reading.

There is a growing body of research (e.g. Carrell, 1985; Geva, 1983; Reutzel, 1985) demonstrating that instruction in text structure facilitates learning from the text. In this instruction, a variety of text mapping strategies have been used. Among the text mapping strategies that have been developed and studied are graphic organizers (Hawk, 1986); flowcharting (Geva, 1983); networking (Dansereau, 1979), and semantic mapping (Carrell et al., 1989). Results of much of the research on the strategies cited indicate that using graphics to present knowledge can facilitate comprehension and recall in varying degrees for students at various levels.

Koran and Koran (1980) suggest that graphic maps provide "an organizational structure to facilitate the semantic processing of the textual material as well as a pictorial alternative to verbal storage and retrieval". In other words, semantic maps provide a focus for reading. They make visible and highlight the structure of the text, thus making the input of knowledge more comprehensible. The semantic map, together with the linguistic devices, also helps students to reconstruct their knowledge after reading and to express it in a second language. It can, therefore, facilitate the acquisition of a second language for academic purposes. Hanf (1971) suggests that semantic maps can also be used as advance organizers, enabling better comprehension, as well as an effective substitute for traditional notetaking and outlining procedure; strategies which the students at the College of Nursing in Mmabatho (cf. opening paragraph) have not been able to master.

This study focuses on a direct strategy training programme of reading in English as a second language. It is designed to address the following research question: Does direct strategy training (cf. Oxford, 1990) (specifically semantic mapping) enhance ESL reading comprehension ?

## **1.2 Purpose of this study**

The aim or purpose of this study is to determine the effect of using one kind of direct reading strategy, semantic mapping, on ESL reading comprehension.

## **1.3 Hypothesis**

The teaching of semantic maps has a statistically significant as well as a practically significant influence on ESL reading comprehension.

## **1.4 Method of research**

A thorough literary survey, dealing with both the reading process and reading strategies was conducted. First-year students taking the Special English course at the College of Nursing in Mmabatho were randomly assigned to two groups (i.e., experimental and control). A quasi-experimental, pretest and posttest, control group design was used. Data were analysed by means of SAS statistical programmes.

## **1.5 Programme of study**

In chapter 2 literature dealing with relevant current developments in second language research and instruction is discussed. This includes changing views of reading theory, especially the Schema Theory and Psycholinguistic Models of reading. Implications for teaching of both Schema Theory and Psycholinguistic Models are also discussed.

In chapter 3 the effect of language learning strategies on comprehension is discussed. Strategies discussed are:

- Locating directly stated main ideas
- Formulating implied main ideas
- Identifying supporting details
- Thinking critically as one reads

Implications of these for second language teaching are also discussed. In chapter 4 Semantic Mapping as a reading technique is discussed. The discussion revolves around a definition of the concept Semantic Mapping, what it entails and what its uses are. This is done as research has demonstrated that Semantic Mapping forces learners to look not only at the relationship between sentences, paragraphs, stated and implied ideas, but also at that between the content of the material and their own experiential background, thus promoting comprehension.

In chapter 5 the method used in this research is discussed. This includes a discussion of the design, subjects, variables, instrumentation and data collection procedure used.

In chapter 6 the results of the analysis are given and discussed.

Chapter 7 contains a conclusion and recommendations for future research.

## **CHAPTER 2**

### **CURRENT DEVELOPMENTS IN SECOND LANGUAGE READING RESEARCH AND INSTRUCTION**

#### **2.1 Introduction**

Improving reading comprehension is a top priority as well as an area of concern for the majority of teachers today. In recent years research on cognition, language acquisition and information processing has contributed to a better understanding of the comprehension process (Goodman, 1985; Smith, 1982).

In the light of this research, comprehension can be viewed as an active process in which readers interpret what they read in accordance with what is already known about the topic, thus building bridges between "new" knowledge and "old" knowledge which already exists (Pearson & Johanson, 1978).

Over the years, different theories and models of language reading and instruction have been formulated to explain what reading and reading instruction entail. Among others, Schema Theory and Psycholinguistic Models of reading seem to be most explored and have had a great deal of influence on reading instruction.

Together, these models emphasize an equal contribution of both the knowledge that the reader brings to the text when he starts reading (that is, his background knowledge), and that contained in the text that he is reading (that is, new knowledge).

A brief overview of the changing views of reading theory is given in this chapter. Schema Theory is discussed in detail as it not only lays the basis for Psycholinguistic Models but also provides a rationale for the use of semantic mapping. Implications of Schema Theory and the psycholinguistic theory for instruction are also discussed.

#### **2.2 Changing views of reading theory**

Research on reading in a second language and efforts to improve second language reading instruction have grown remarkably in the latter part of this century. This has

brought about certain transitions and changes in both theory and practice (Clarke & Silberstein, 1977: 17).

Clarke and Silberstein (1977) maintain that as a result of the influence of audiolingualism, most efforts to teach reading in the 1960s were centred on the use of reading to examine grammar and vocabulary or to practise pronunciation.

However, in the early 1970s ESL instruction changed to emphasize advanced reading and writing instruction. Through the early to mid-1970s a number of researchers and teaching trainers argued for greater emphasis on reading (e.g. Eskey, 1973; Saville-Troike, 1989).

By the mid to late 1970s, many researchers had begun to argue for a theory of reading based on work by Goodman (1967, 1985) and Smith (1971, 1979, 1982). The research and persuasive arguments of both Goodman and Smith evolved into a psycholinguistic model of reading. Goodman's research led him to propose that reading is not primarily a process of picking up information from the page in a letter-by-letter, word-by-word manner, but that it is a selective process and a psycholinguistic guessing game.

Two efforts to translate this theory into ESL contexts have been extremely influential on ESL reading theory and instruction from the late 1970s to the present. Clarke and Silberstein (1977) outlined implications for instruction which could be drawn from a psycholinguistic model of reading. Reading was characterized as an active process of comprehending and students needed to be taught strategies to read more efficiently. These would include: guess from context, define expectations, make inferences about the text and skim ahead to fill in the context. Through reading instruction, teachers aimed at providing students with a range of effective approaches to texts, including helping students define goals and strategies for reading, to use prereading activities to enhance conceptual readiness and to provide students with strategies to deal with difficult syntax, vocabulary and organizational structure.

Coady (1979) re-interpreted Goodman's psycholinguistic model into a model specifically suited to second language learners. Coady argued that a conceptualization of the reading process requires three components: processing strategies, background knowledge and conceptual abilities.

While the 1970s was a time of transition from one dominant view of reading to another, the 1980s was a decade in which much ESL reading theory and practice extended Goodman's and Smith's perspectives on reading (Bernhardt, 1991).

Even though transition took place from one era to another, the contribution of cognitive psychology is undeniable. Consequently the rest of this chapter focuses on an analysis of Schema Theory and the Psycholinguistic Models of reading.

## **2.2.1 Schema Theory**

### **2.2.1.1 History of the notion of a schema**

One theory of memory which has had a great deal of influence on theories of language and those of reading is Schema Theory. The basic idea is that human memory consists of high level structures known as schemas, each of which encapsulates knowledge about everything connected with a particular object or event (Goodman, 1976).

A systematic study of the effect of schemata on memory has suggested that memory distortions can occur when an attempt is made to fit stories into schemata. This notion was later expanded to cover many different situations as schemas for actions like riding a bicycle, schemas for events like going to a restaurant, schemas for situations like working in an office and schemas for categories such as in birds and mammals (Bower, 1970).

### **2.2.1.2 Schemas and frames**

The notion of schemas as a mode for organizing memory representations of objects, situations and events was later reformulated as frames. These knowledge representations were called frames because they were thought to be frame-like networks for describing categories of objects and events.

These frames are networks with slots which can be filled in with compulsory or optional values. In the absence of information about a particular situation, default values (the most commonly expected values) represent general expectations. The

following is an example of a simple frame to represent some aspects of the schema representing the concept "dog":

(A) DOG IS AN	ANIMAL	Compulsory value
HAS	FOUR LEGS	Default value
		Optional values
TYPE		Collie, poodle
SITUATIONS		Optional values park, house, shop
OWNER'S ACTION		Optional values walk, feed, buy, etc.

(Greene, 1988:3).

### 2.2.1.3 Scripts

The term scenario was used for frames that describe events. This idea was later extended by Roger Schank and his colleagues (cf. Greene, 1988) in the form of scripts which describe simple routine, like their *restaurant script* which describes what goes on in a restaurant. They also simplified this notion of scripts as listing the default (the most expected) values for actions which would be expected to occur in any restaurant.

However, Schank (1982) himself pointed out some of the inadequacies of scripts as a complete explanation of the role of inferences in language understanding. For instance, he maintains that there would be an enormous proliferation of scripts for all possible sequences of events like dressing in the morning, catching a bus, going on an aeroplane, etc.

### 2.2.1.4 Goals and plans

Stories were formulated in terms of people's goals and actions. Like all schemas, these are also based on people's motives and intentions in real-life situations.

According to this view, people use language to communicate about things that are important to them. Schemas necessary for understanding language are therefore identical with those used for understanding the world about us and the motives behind people's actions. Instead of constantly asking what speakers mean, they make inferences based on general knowledge about what they (speakers) are likely to be referring to and meanings they are likely to be referring to. The following are examples of primitive plot units:

**PROBLEM:**

- i You get fired and need a job.
- ii You bounce a cheque and need to deposit funds.
- iii Your dog dies and you long for companionship.

**SUCCESS:**

- i You ask for a raise and get it.
- ii You fix a flat tyre.
- iii You need a car so you steal one.

**FAILURE:**

- i Your proposal of marriage is declined.
- ii You can't find your wallet.
- iii You can't get a bank loan.

**RESOLUTION:**

- i Your broken radio starts working again.
- ii They catch the thief who has your wallet.
- iii Your book is reviewed but they hate it.

**2.2.1.5 Story schemas and story grammars**

Psychologists (e.g. Rumelhart, 1977) have proposed that at least for fiction, all different surface forms of stories can be interpreted in terms of a "deep" underlying structure which is

universal to all stories. This deep structure can be defined by a set of rules known as a story grammar. This means that a structure of a story can be defined in terms of rules which can be used to rewrite the story into component parts.

A set of grammar rules for simple stories was also proposed. According to rule 1, a story can first be broken down into a setting followed by a theme, a plot and a resolution. Rule 2 states that the setting can be rewritten as consisting of information about characters, the location and time at which the story takes place. According to rule 3, the theme can be rewritten as stating the goal of the main character. Rule 4 states that the plot consists of one or more episodes that include subgoals, attempts and outcomes. Rules 5 and 6 state that the resolution consists of an event which is desired in terms of the original goal as stated in the theme (cf. Smith & Goodman, 1971).

It is maintained that story grammars are particularly suitable for folk-tales which are passed on orally from generation to generation before being written down. They attribute the fact that traditional story-tellers are able to recite long complex stories from memory to an underlying structure of story grammars. Story grammarians believe that people have stored schemas in memory which represent expected literary conventions for structuring typical stories. These story grammars can be said to represent readers' and listeners' expectations about the form of linguistic inputs found in stories and texts.

Schemas and frames, scripts, goals and plans as well as story schemas and story grammars show that the notion of the schema has been developed over the years to cover different aspects of language learning, including reading of texts. These serve especially as crucial frameworks to the learning and teaching of reading.

#### **2.2.1.6 Elements of Schema Theory**

A schema theory is a view of comprehension derived from research on the comprehension and memory of printed texts. This view argues that what goes on "inside-the-head" of the reader is crucial. Schema Theory attempts to show how knowledge already stored in the reader's memory functions in the process of interpreting new information and allowing it to enter and become a part of the knowledge stored. This interaction between old and new information is called comprehension (Nuttall, 1983: 15).

As far as this view is concerned, the reader is not just a passive receiver waiting to decode all that the writer says. Nuttal (1983: 17) equates propositional processing, which contradicts schema theory, to a jug full of water waiting to be poured into the reader's mind. However, he argues that a reader does not always understand all that he reads and the illustration should therefore show some of the water trickling down the reader's face.

Schema Theory argues that decisions at a lower level are influenced primarily by representations at a higher level. According to this view, people's interest in the meaning of what they hear and interpret over-rides the language through which this meaning is conveyed.

Research on interest suggests that students comprehend better when they read passages that deal with topics of high interest to them. One example illustrating the influence of interest shows students who were all so-called low-track achievers. When reading a text on government, these students proved that they deserved the label. However, during the reading of the unit on driver education, the unit which is said to be more difficult than the one on government, they performed very well. Students who could not cope with words and concepts like *congress* and *government* understood words like *semaphore* and *right-of-way*. This confirms the belief that interest as well as motivation plays an important part in comprehension.

Proponents of Schema Theory believe that reading only serves to confirm expectations of readers (Bower, 1970; Schank, 1982). They believe that the skilled reader only draws on syntactic knowledge, that is, when activated, discourse schemata do not uniquely determine the discourse relevance of the stimulus.

From the research carried out to verify this notion, children aged two and three interpreted the following sentences in the same way despite the differing constructions:

- i        The cat chased the mouse.
- ii       The mouse chased the cat.

There is evidence that shows that mature listeners depend quite strongly on their semantic expectations. For example, it was discovered that, when asked to provide paraphrases of sentences with an unusual sequence of events like: (a) John dressed and had a bath, and (b) John finished and wrote the article on the weekend, over 60 % changed the sequence to accord with their expectations.

This implies that for the reader to comprehend, he needs to recognize sentences that are both grammatically acceptable and those that are equivalent in meaning. He also needs to be able to paraphrase sentences to understand them better. In order to do all these activities, readers need syntactic knowledge. When activated, discourse schemata do not determine the discourse relevance of the stimulus and then the reader relies heavily on his existing syntactic knowledge.

Semantic knowledge also accounts for the extent to which comprehension takes place as it is only when readers are able to classify words that belong together and differentiate between those that are used inappropriately that they will be able to understand what they read.

It can therefore be concluded that the closer the match between the syntactic and semantic information on a printed page and the syntactic and semantic information in our head, the greater the likelihood the text will be understood (Greene, 1988: 21).

Reading ability is also shown to be a contributory factor towards understanding what one reads. LaBerge and Samuels (1973) point out that the reader who devotes considerable attention to word identification has little or no attention left over to direct towards processing the meaning of the message, hence comprehension is minimal. On the other hand, readers whose word identification skills are good, proceed automatically and require little attention to pay to individual words.

In a way, it can be said that Schema Theory emphasises that the ability to retrieve meaning from written texts by readers is crucial; however, these readers also need a means towards this end, namely, linguistic knowledge.

#### **2.2.1.7 Summary**

Schema Theory is basically a theory about knowledge. It is a theory about how knowledge is represented and about how that representation facilitates the use of the knowledge in particular ways. According to Schema Theory, all knowledge is packaged into units. These units are the Schemata. Embedded in these packets of knowledge is, in addition to the knowledge itself, information about how this knowledge is to be used. A Schema then, is a data structure for

representing knowledge about all concepts: those underlying objects, situations, events, sequences of events, actions and sequences of actions.

Perhaps the central function of schemata is located in the construction of an interpretation of an event, object or situation, that is, in the process of comprehension. In all this, it is useful to think of a schema as a kind of informal, private, unarticulated theory about the nature of the events, objects or situations people face. The total set of schemata available for interpreting the world in a sense constitutes the private theory of the nature of reality. The total set of schemata instantiated at a particular moment in time constitutes the internal model of the situation people face at that moment in time, or, in the case of reading a text, a model of the situation depicted by the text.

Schemata are like theories in another important respect. Theories, once they are moderately successful, become a source of predictions about unobserved events. Not all experiments are carried out. Not all possible observations are made. Instead, people use theories to make inferences, with some measure of confidence, about these unobserved events. So it is with schemata. People need not observe all aspects of a situation before being willing to assume that some particular configuration of schemata offers a satisfactory account of that situation. Once a configuration of schemata has been accepted, the schemata themselves provide a richness that goes far beyond people's observations. After all, upon seeing an automobile one assumes that it has an engine, headlights and all of the standard characteristics of an automobile, and one is seldom disappointed in this expectation.

Psycholinguistic Models of reading can be said to be based on Schema Theories as they also emphasize activation of schemata for comprehension to take place. Psycholinguistic Models view reading as "only incidentally visual" and therefore a "psycholinguistic guessing game". It is because of the fact that both the Schema and Psycholinguistic Theories seem to support the same cause that it was considered necessary to discuss Psycholinguistic Models in the next section.

### **2.2.2 Psycholinguistic Models of reading**

Psycholinguistic Models of reading draw extensively upon the analysis-by-synthesis principle which is based on basic principles of cognitive psychology and attempt to explain oral

language comprehension. The analysis-by-synthesis principle places reading under the power of the reader and allows it to change according to his informational needs.

According to a psycholinguistic interpretation of the reading process, reading does not necessarily begin with print but with the language of the reader and all that it represents. According to this view, readers read with purposes and expectations which they compare with the text to confirm their hypotheses. This is, therefore, a top-down (conceptually driven) model whereby the text is supposedly "sampled" and predictions made on the basis of the reader's prior syntactic and semantic knowledge (Goodman, 1967; Smith, 1976; 1985).

Proponents of psycholinguistic models believe that reading is only incidentally visual (Mckinnon & Waller, 1981:4) as the meaning that the reader brings to the text, his knowledge of the language and that of the world, plays a crucial role in his understanding of texts, hence the description of reading as a "psycholinguistic guessing game" whereby the reader uses the text only to compare his purposes and expectations and seeks confirmation of his hypothesis (Goodman, 1967).

It is because of this conviction that psycholinguistic theory has earned names like "Inside outside", which suggests that the reading process starts from inside rather than with print which is outside the reader, "Conceptually driven", a notion based on the view that the linguistically sophisticated reader sees concepts that words represent and not just the words themselves, and "Explored" as this theory explores not only the text and the reader, but also the environment in which the reader finds himself.

The formation of these models is in fact a reaction against bottom-up models which, among others, are criticised for being linear. Contrary to the bottom-up theory which emphasises that reading starts with print, psycholinguistic theory argues that word recognition is more than a serial integration of words. According to these models, "What distinguishes the skilled reader from the novice ... is not the amount of visual information that he can pack into a single fixation, but the amount of non-visual information with which he can leaven the featural input and make it go the farthest" (Mckinnon & Waller, 1981:63).

The psycholinguistic theory distinguishes between the writer's visible information, that which is seen and read by the reader and the invisible information brought by the reader which is said to override that which is in print. According to this theory reading does not necessarily begin

with print but with the invisible information that the reader possesses, that is, his knowledge of the language and all that it represents.

Psycholinguistic Models emphasize the use of context as first strategy in reading and the fact that readers create their own meaning rather than reconstruct that of the writer as they only sample important text information in order to verify hypotheses and predictions. Reading is therefore viewed as being conceptually driven by higher order stages rather than by low-level stimulus analysis.

This implies that when reading, readers need not perceive every letter or word. They read only enough of the print to compare it with what they are anticipating and if their expectations are continually confirmed, their reading flows almost effortlessly (Grabe, 1991). If new information presented conflicts with their expectations, then reading will be difficult and more attention will have to be paid to print as both visible and invisible information is used by the reader to reconstruct the writer's message hence: "The more non-visual information to readers, the less attention they need to give to print" (Smith, 1982: 230).

Smith (1971: 117) argues that the redundancy inherent in all levels of language (letter features within letters, within words, within sentences and within discourses) provides the reader with enormous flexibility in marshalling resources to create meaning for the text at hand.

Nuttal (1983: 11) equates a text to a "do-it-yourself-kit" and a reader to an amateur furniture maker trying to work out how the pieces of this kit fit together. He argues that a man who knows a bit about carpentry will make his table more quickly than the man who does not. He therefore draws the conclusion that "The reader's sense and experience help him to predict what the writer is likely to say next" (ibid).

The psycholinguistic Model prohibits a reader from going from symbol to sound and then to meaning. According to Goodman (1967, 1970, 1976) and Smith (1971), decoding can be either direct (graphemes to meaning) or mediated (graphemes to phonemes to meaning). This is a characteristic that gives the model its unique aspect of having the greatest impact on conceptions about reading construction, particularly early instruction. It is an aspect from which its title, the whole-language-approach, is derived.

The world of knowledge or invisible information that the reader brings to the print and which is said to give meaning to print is divided into semantic information, syntactic information, the reader's knowledge of orthography and that of his phonological rules.

Like Schema Theory, Psycholinguistic Models of reading emphasize the importance of the reader's background knowledge for comprehension to take place, that is, the knowledge that he already possesses. Psycholinguistic Models emphasize the use of language as just a way through which a message is conveyed. As all these models were formulated in an attempt to help teachers teach reading effectively, their implications for instruction are discussed next.

### **2.2.3 Implications for instruction of both Schema Theory and Psycholinguistic Models of reading**

On the basis of reading theory and research on Schema Theory and psycholinguistics in general, fundamental principles have been formulated which provide for optimal results in the teaching of reading.

For both Schema Theory and the Psycholinguistic view, the essential task for a reader is the recovery of meaning (Smith, 1971; Gates, 1928). Reading is a form of communication the goal of which is the reception of information through written forms. A teaching programme, consequently, should direct itself to the realization of that goal. Research evidence (Steinberg, 1978; Steinberg, 1982), shows that meaningful words are easier to learn than meaningless items such as letters. Teaching meaningful items in a meaningful personal context is therefore believed to provide the best foundation for the teaching of reading.

Both views discourage learners from being "word-barkers" and by so doing promote the use of context to derive meaning of unknown words (Rumelhart, 1977). There is evidence that readers have more difficulty selecting meanings of abstract words and that they would have more difficulty understanding a text that is riddled with abstract words (Thorndyke, 1977). Rather than trying to derive meanings of individual words, the use of context is preferable as it also saves the learner's time.

Reading ability could therefore be developed by helping learners to learn better techniques for selecting specific meaning cues for words, learning the structure of written language and developing experiential background essential for understanding concepts in the printed material (Greene, 1988:33).

Both Schema Theory and Psycholinguistic Models emphasize the crucial role played by background knowledge during the process of comprehension. This implies that the activation of schemata should take place during instruction of all aspects. During reading lessons, instructors need to emphasize the use of the learner's prior knowledge. Educators should therefore link what learners already know to the new information that is taught (Steinberg, 1982).

Both emphasize the fact that readers read only to confirm their hypotheses. This implies that in reading texts, prior knowledge of story structures would be helpful to readers. For instance, in a fairy tale, folk tale or fable, the structure is very predictable. This supports comprehension and Schema Theory and the Psycholinguistic Models of reading would then urge reading instructors to make their learners aware of these (Rumelhart, 1977:83; Stein, 1981:128; Thorndyke, 1977:53).

Thematic information is also said to be crucial for the understanding of texts. Instructors are therefore urged to teach their learners how to get it from appropriate information, as in main ideas and visual displays like semantic mapping (Pearson & Johanson, 1978:83) whereby all aspects of a text are linked together. Semantic mappings like these are crucial as they also link what the learner already knows to what he reads in a text.

Although some understanding of language is necessary for the teaching of reading, a complete mastery is not. Partial language knowledge is sufficient as both Schema Theory and Psycholinguistic Models maintain that reliance on the written language and existing knowledge about sounds associated with graphemes should be minimised. Reading should therefore not depend on teaching new language or concepts.

According to Schema Theory and Psycholinguistic Models, reading is not dependent on speech production or writing (Steinberg, 1982:204). Rather, reading is dependent on speech understanding and vision where the source of speech understanding is considered to be thinking and audition. A reading lesson should not, therefore, depend on the teaching of writing.

Reading should be made an enjoyable activity for learners (Murray & Johanson, 1989:76). This can be done by providing instruction in the form of interesting games and activities (Steinberg, 1982:205). As a consequence, not only will children learn to read, they will want

to read. Learners who are interested, intellectually stimulated and who enjoy what they are doing will learn willingly and will not mind applying some effort. To foster these aims, no reading/teaching activity should be included which learners find boring.

Both Schema Theory and Psycholinguistic Models encourage the use of what appears in the text and what the reader already knows. However, in both models, the reader's prior knowledge should form the basis of any reading and reading instruction. Even though the essential task for any reader is recovery of meaning, he needs semantic knowledge to be able to derive meaning.

Semantic mapping can therefore be said to be one of the most important teaching and learning techniques that could satisfy these teaching requirements as it not only links the reader's prior knowledge to the new information that he/she reads but is also an enjoyable activity for learners at all levels. It also provides the reader with a global view of all aspects discussed in a text and how they interrelate.

### **2.3 Conclusion**

Over the years theoreticians, researchers and educators have attempted to establish ways that would enable readers to comprehend what they read. In the process, they have attempted to establish factors that influence reading comprehension and formulated models to serve as frameworks on which reading with comprehension and reading instruction can be based. Among others, Schema Theory and Psycholinguistic reading models were found to be most helpful.

According to these models, both linguistic and non-linguistic components of texts contribute equally to reading comprehension. They believe that what goes on inside the heads of readers during the reading process is facilitated by what goes on outside their heads. They also believe that even though readers read to derive meaning, their linguistic competence is the medium through which this meaning is conveyed, and it is therefore crucial and in fact indispensable. This linguistic knowledge includes the syntactic, semantic and phonological knowledge of readers.

Non-linguistic components of language include issues like interest and motivation, readers' decoding ability and factors in their environment as in school classrooms and at home. It can therefore be concluded that reading comprehension takes place only when what is inside the

reader's head (the knowledge he already has about language and the world in general) interacts with what is outside, the non-linguistic component of reading.

This implies that for reading teachers to achieve this goal, they need to develop a teaching technique that would not only help them derive the meaning/message conveyed by the writer, but that would also make use of the knowledge they already have as the basis for the incoming knowledge. Due to research that confirms semantic mapping as an effective strategy (Levin, 1984; Johanson et al., 1986), it can undoubtedly be said that semantic mapping is the one strategy that could apply the findings of both Schema Theory and Psycholinguistic Models in reading classrooms.

## CHAPTER 3

### THE EFFECT OF LEARNING STRATEGIES ON COMPREHENSION

#### 3.1 Introduction

Although children learn to read at home and school with many different forms of instruction, most acquire fundamental reading skills within the first number of years. By the third or fourth standard children are expected to be able to pick out main ideas in texts, to attend to important information more than peripheral details and to connect ideas from different parts of stories.

Nevertheless, many children do not progress beyond decoding words and do not inculcate effective comprehension skills. But rather than instructing children on how to use strategies to improve comprehension, many teachers simply give poor readers more practice on the worksheets that they have not mastered (Gilliland, 1978: 238).

Durkin's (1981) classroom observations revealed that teachers rarely provided explicit instruction to children on how to use comprehension strategies while reading. Durkin (1981) also analysed teachers' manuals and found that they directed teachers to engage in question-and-answer sessions about the content of children's reading, but the manuals provided virtually no instruction to children about how to read.

Given the lack of information available to teachers and the small amount of time devoted to actual comprehension instruction, it hardly seems surprising that even at tertiary level today, learners do not develop effective strategies for comprehending what they read.

Children's reading comprehension can be limited because they do not know about strategies, such as using context to understand new words, that can aid their understanding (Paris et al., 1983). They may not realise that they should stop periodically to check their own comprehension and take corrective steps (Garner, 1984;). Even when children know about the existence of strategies, they may not understand their benefits clearly (Brown, 1980).

It seems clear that most teachers and most reading materials direct their instruction toward the content of students' reading and provide little direct information about how to understand what they are reading. However, recent research done in the seventies and eighties on cognitive

development (Greene, 1988:33-45) and reading instruction (Gilliland, 1978:229; Spache, 1972:51) demonstrates dramatically that young children, poor readers and all other learners can profit greatly from instruction that enhances the use of background knowledge, cognitive strategies and metacognition.

Owing to the importance of strategies, some of the most popular are discussed in this chapter. These are: i) Determining the subject matter of the text, ii) locating directly stated main ideas, iii) formulating implied main ideas, iv) identifying supporting details and v) thinking critically as one reads.

Given these strategies, it is up to teachers to develop a technique to help instil them into their learners. Semantic mapping, which is seen as a practical way of applying Schema Theory in the classroom while teaching learners how texts are organized (Antonacci, 1991), and has been acknowledged as an interactive approach between reader and text by which meaning is found and created, and is seen by educators (Heimlick & Pittleman, 1986; Murray & Johanson, 1989; Novak, 1986) as a possible solution towards problems encountered by reading teachers and learners.

## **3.2 Reviewing reading strategies**

### **3.2.1 Determining the subject matter of the text**

The human mind strives to see the organization or pattern of things because organized information is easier to grasp and to remember. Writers understand this so they try to present ideas in an organized way. Because of this, each sentence and every detail in a well-written paragraph gives information about the subject matter. If the sentences did not have a common subject matter, they would not be a paragraph, but simply a collection of unrelated sentences.

Determining the subject matter of a text implies focusing attention on what a text is basically about (Cortina et al., 1989:13-47). The subject matter of a paragraph provides readers with a convenient way of describing what all details in the passage pertain to (Murray & Johanson, 1989: 108-109).

Determining the subject matter of a text can be attained through asking the following questions (Cortina et al., 1989:17).

- a) Who or what is the passage all about?
- b) What is being discussed?
- c) What is the topic of the passage?

Sometimes the writer uses headings at the beginning of the passage that indicate the subject matter.

Realizing that he/she has not yet determined the subject matter should alert the reader to take additional steps in order to identify it. The following are some suggestions by Horowitz and Samuels (1987: 290).

The reader should:

- a) See whether the author identifies the subject matter by using headings in bold print.
- b) See whether a word, name or phrase appears in bold print within a passage.
- c) See whether a word, name or phrase appears more than once within a passage.
- d) See whether the passage begins with a word or phrase that is then referred to throughout the passage by a pronoun (he, she, it or they) or by other words.
- e) When reading a passage, see what subject the sentences have in common.

Once the reader has correctly determined the subject matter of the passage, he can begin to ask useful questions about the subject matter in order to comprehend correctly what he reads. He is therefore ready to identify the main idea of the passage which is discussed next.

### **3.2.2 Locating directly stated main ideas**

Directly stated main ideas are sometimes called topic sentences and they focus the reader's attention on the most important idea in the passage or the central idea which the author wants his readers to understand about the subject matter. Main ideas are mostly presented in the first sentence of the paragraph. However, they can also be found either in the middle or at the end of a paragraph (Arnaudet & Barrett, 1984:2).

The following are some of the advantages of determining the main ideas of the paragraphs read,

- a) as actively seeking main ideas helps readers focus concentration on what they read. This lessens distraction since there is a purpose to the reading;
- b) since the main idea holds the details of the paragraph together, readers will be able to recall many more of the details that support the main idea;
- c) readers will find that determining the main idea is an aid in studying. For example, they will be able to identify and mark important information in their textbooks. They will also be able to take effective notes and outline material more efficiently;
- d) identifying the main ideas of separate paragraphs enables effective writing of summaries and longer selections.

Writers present their ideas paragraph by paragraph with one main idea in each paragraph. In a paragraph there is usually one sentence which states the main idea. This makes the reading task easier. However, the reader still needs to determine the sentence that states the main idea. Main ideas can sometimes be stated indirectly or just implied. A discussion of this follows next to caution readers not only to notice main ideas that are directly stated.

### **3.2.3 Formulating implied main ideas**

Sometimes, instead of giving directly stated ideas, writers just give facts and examples. Sometimes they only introduce or conclude. Readers will therefore have to formulate their own main ideas on the basis of the information given.

In order to understand the paragraph more clearly, readers need to formulate the main idea in their own words. When main ideas of paragraphs are implied, it is a responsibility of a reader to formulate these ideas in their own words for better understanding to take place.

Cortina et al. (1989:84) present several ways in which a writer may present main ideas indirectly: although the writer may have presented most of the main idea in one sentence, the reader must sometimes add a word or phrase from another sentence to create a complete main idea.

Another way a writer may express main ideas indirectly is to present parts of the main idea in two different sentences. These sentences may follow one another in the paragraph or they may be separated.

A more common way of expressing main ideas indirectly is one in which the author expects the reader to combine and interpret important ideas from several sentences. In this situation, readers must combine and interpret the author's ideas according to their own experience and knowledge. Readers will have to use several of their own words to express the author's main ideas.

On their own, main ideas do not make sense. In order to enable readers to follow the writers's argument and see how one idea links with the next, writers use supporting ideas. As this is one of the most important components of texts, it is discussed next.

### **3.2.4 Identifying supporting details**

If each paragraph is supposed to have only one idea, then learners may wonder what all those other words and sentences are doing in that paragraph. These are used to enhance the main idea and they are therefore called supporting ideas (Murray & Johanson, 1989:115).

The following are some of the benefits of examining and understanding the details which support the main idea of a paragraph as outlined by Cretchley and Stacey (1986:207):

- a) Understanding the supporting details is a key to understanding the main idea completely.
- b) Understanding supporting details makes it easier to remember significant information from the passage because material that is understood is easier to remember.
- c) Related to memory is the fact that understanding supporting details helps readers grasp the organization of the entire paragraph. This enables readers to take notes from and mark their textbooks intelligently and effectively.
- d) During tests and examinations, questions are based on supporting details.

Good readers consistently ask themselves questions as they read in order to understand the main idea completely. However, effective readers do it on a regular basis, whereas ineffective readers ask themselves few questions as they read (or sometimes none at all).

To be effective, the reading process must be an interactive one (Greene, 1988:35). Readers need to pose questions, then read to see if their questions are answered. Answering specific questions about the passage will provide the reader with a deeper understanding of the main

idea and key details (Cortina et al., 1989:50). The questions that the reader asks should be based on the main ideas. Answers to these questions will be supporting ideas (ibid).

Although every detail in the passage pertains to the main idea, some are more important than others. The most important supporting details are essential to the reader's complete understanding of the main idea. The other details may add interest, colour or clarification. Supporting details can therefore be said to be obvious and logical extensions of the main idea. The supporting detail question leads readers to details that further explain the main idea (Arnaudet & Barrett, 1984:3; Cortina et al., 1989:119-155; Murray & Johanson, 1989:99).

Mastering the skills of subject matter, main idea and supporting details of a passage is the starting point for learning most College subjects. Together these skills are the basis for becoming a successful reader and learner. They are an important step towards critical thinking which any reader needs in order to interact with the text.

### **3.2.5 Thinking critically**

Thinking critically as one reads involves going beyond merely locating or formulating the main idea and identifying the supporting details (Cortina et al., 1989:162). Part of critical thinking involves understanding what the textbook author wants readers to believe, think or do as a result of understanding the passage (Horowitz & Samuels, 1987:288). It may also include recognizing when readers are being presented with an author's opinion or conclusion (Cortina et al., 1989:162). Critical reading frequently requires time to reread and to reconsider the author's message.

Effective readers know that although opinions cannot necessarily be proved, they can be as important as facts (Murray & Johanson, 1989:102). Because opinions are author's judgements, evaluations or interpretations, authors often use special words or phrases that alert readers that they are reading opinions (Arnaudet & Barrett 1984:6).

The following are some of these words as outlined by Cortina et al. (1989:162):

Perhaps

Apparently

Presumably

One possibility is

One interpretation is  
 In our opinion  
 Many experts believe  
 According to  
 It seems likely  
 This concept suggests  
 In our view  
 In most cases.

Often authors combine opinions and facts in the same passage and even in the same sentence. It may be difficult at times for readers to distinguish opinions from facts because the author has presented opinions in such a way that they seem like facts. On the other hand, sometimes an author will feel so strongly about an opinion that he will express it in a very obvious way. In either case, it is the reader's responsibility to think critically as he reads and identifies opinions presented in textbook passages.

Thinking critically therefore implies readers asking themselves additional questions about the main idea and the supporting details and asking themselves whether these are opinions or facts (Cortina et al., 1989:165).

Reading critically also involves recognizing conclusions stated by the author (Horowitz & Samuels, 1987:289). Although they may not always do so, authors frequently use certain words that signal a conclusion. The following are some of these as outlined by Murray and Johanson (1989:146):

In conclusion  
 Thus  
 Therefore  
 Finally  
 Consequently  
 It seems likely

Reading with comprehension also involves making inferences about what one reads (Greene, 1988:24) This implies going beyond the stated information and deducing additional meaning (Cortina et al., 1989:171). The reader must therefore make the connection between what the

author actually says and what he wants to understand. This shows how interrelated deducing meaning is to interpretation of linguistic inputs (ibid).

The following are some of the ways in which inferences can be made when reading:

*a The given-new contract*

Greene (1988:24-33) introduced the idea of a given-new contract which holds between a speaker and a listener, or a writer and a reader. According to the contract, it is the duty of a speaker or writer to indicate the given information by making it clear who or what is being referred to as in the sentence: "Mary Brown was feeling ill; so she left to go home." However, one should also acknowledge the fact that the given information can sometimes be indirect as in: "I walked into John's room. The chandeliers sparkled brightly". In this case, the inference to be made is that the chandeliers are hanging in the room the speaker walked into.

The notion of the given-new contract was extended by introducing the more general term "audience design" which refers to the fact that speakers and authors intend their utterances to be understood by the particular audience to whom they are addressed. This is also based on the assumption that speaker and listener as well as writer and reader share some mutual knowledge and beliefs.

*b Bridging inferences*

Clarke and Silberstein (1977) claim that listeners can only understand sentences if they already have in mind an antecedent for the given information, or can construct an antecedent by making a bridging inference. He argues that listeners will only be able to understand the sentence: "She left to go home", if they create an antecedent for "she" by making the inference that it must be referring to someone already known or recently mentioned.

Understanding also depends on shared assumptions about social conventions. Misunderstandings arise when the assumption of mutual knowledge and beliefs breaks down. This comes about when bridging inferences intended by the speaker/writer are not the same as those assumed by the listener/reader as in the sentence: "John was dancing with Susan when Mary left the party early". This would be easy to understand if both speaker/author and

hearer/reader knew the past history of the three characters. A reader/listener can infer that Mary was John's wife or girlfriend. However, a different conclusion can also be made.

Making inferences can then be said to require that the reader makes the connection between what the author wants his readers to understand. Inferences are always based on something, as in the author's descriptions, facts, opinions, experience and observations. Using the information the author has presented, readers must also comprehend more information than what is directly stated.

It is likely that these strategies grounded in theory will prove to be the most effective and contribute the most to understanding how humans process written information. However, this will only be the case if learners are taught how to use these strategies. That is, they need a working technique that will help them derive the information they need from texts. Since it has been demonstrated that skilled readers use background knowledge to construct meaning from the printed page, unskilled readers could benefit greatly from a strategy that would teach them to do the same. It seems as if semantic mapping, which is seen as a tool that would help learners use their prior knowledge in comprehending textbooks, is one of the techniques that would ensure that these strategies are instilled in learners.

Implications for second language teaching of these strategies follow.

### **3.3 Implications for second language teaching/instruction**

The primary implication of reading strategies is that if a reader cannot put together what he is reading and what he already knows in a "holistic manner" (Melnik, 1974:17), then it follows that comprehension does not take place. Robinett (1978) believes the following to be crucial for instruction:

- The reader's grasp of the subject matter of the reading;
- the reader's understanding of the cultural content implicitly or explicitly expressed; and
- his ability to cope with the grammatical structures in the passage.

It is further implied that mere verbal comprehension of main ideas and supporting details is not enough (Melnik, 1974:253). Instruction should ensure that there is judgement on the basis of knowledge, appraisal of the author's sources of information and recognition of his intent and purpose.

For centuries scholars learned by listening to orations and committing them to memory. Here great importance was attached to memorizing details and elaborate strategies were developed in order to accomplish gargantuan feats of retention (Melnik, 1974:269). However, the above-mentioned strategies are set against mnemonic aids as they are believed to have only limited usefulness in the context of learning from books. Educators are therefore cautioned that it is not verbatim recall that is required of the reader but an appreciation of the overall picture being presented by the writer.

Nuttal (1983:11) emphasizes the importance of relevancy in extracting the message the writer is trying to convey rather than what readers might prefer. This calls for monitoring the comprehension of readers. Educators are therefore urged to acquaint learners with the type of questions they should ask themselves as they read to facilitate their understanding. The following are some of the most recommended:

- \* Is this paragraph giving me different items of information about a certain subject ?
- \* Is this paragraph showing me step by step how something is/was made ?
- \* Does this paragraph give examples to simplify certain ideas?
- \* Is this paragraph giving me the definition of a word/phrase?
- \* Is this paragraph telling me in a series of events what happened to someone?
- \* Is this paragraph talking about a problem or maybe its cause and solution?

Smith (1985:205) believes that the above strategies imply that teachers should see to it that those who learn to read are taught the following steps of comprehension:

## 1 **Recognize**

This means that learners should learn to identify the reality/purpose of the topic. They should be able to place themselves in the setting/conceptual framework of the passage.

## 2 **Recall**

Learners should be able to search for and select information. They should remember details or find them in a reading including sequence of events and location of major topics.

### **3 Analyse**

Learners should be able to make inferences and manipulate information to determine main ideas, comparisons, cause and effect, organizational patterns and similar tasks that require the reader to create a mental scheme for sorting information and relating it to the purpose of the schema.

### **4 Judge**

Learners should be taught to select criteria and apply them to the passage to decide on feasibility, aesthetic appeal and other purposes that require standards for making evaluative decisions.

### **5 Use**

Learners should also be taught how to extend the information/feeling of the passage /book by applying it.

According to these implications, it is clear that reading strategies used should not direct attention to individual aspects of texts but should rather interpret a text as a totality.

## **3.4 Conclusion**

Comprehension implies grasping the message conveyed by the writer and relating it to what learners already know. Comprehension theory views comprehension as a joint effort by the reader and the text. Comprehension can therefore be achieved through a reading strategy that not only concentrates on individual aspects of a text but which is able to relate all these aspects and finer details of a text together.

Semantic mapping, which is a process of organizing information by categories that help students graphically (visually) relate words and ideas to one another and " ... an excellent organizational device for text which has subtopics about a major topic", is viewed as a most effective way of improving passage comprehension and in developing study skills (Heimlich & Pittelman, 1986) as it also integrates reading with learning content and promotes independently reading more difficult, higher-level content materials.

## **CHAPTER 4**

### **SEMANTIC MAPPING AS A READING TECHNIQUE**

#### **4.1 Introduction**

Since the sole purpose for reading is to get meaning, instruction in all other reading skills is pointless if a learner does not develop good comprehension of what he/she reads. This will be true throughout his/her life, no matter whether he/she reads for pleasure or information. A good reader must be able not only to recognize printed words but also to get ideas from them and relate them to experience, organize them, weigh them and use them. Although comprehension is the most important part of reading, it is usually the most poorly taught. This is because it is difficult to analyse, to diagnose and especially to prescribe a specific teaching technique.

Teaching isolated comprehension skills as separate entities may not lead to comprehension of passages. Nor will understanding each sentence in a passage necessarily lead to comprehension of the entire passage (Novak, 1986:206). Comprehension requires seeing the relationship between sentences, between paragraphs, between stated and implied ideas and between the content of the material and the reader's experiential background. Teaching of comprehension strategies therefore calls for teachers not only to teach comprehension skills but to know how to teach strategies of translating reading into thought (Hanf, 1971:225).

Readers with rich background information have been demonstrated to approach texts somewhat differently (Hanf, 1971; Heimlick & Pittelman, 1986; Pearson & Johanson, 1978). They not only comprehend the author's message, but begin to restructure their "old" information to include the "new". The result is a precise and elaborate network of conceptual knowledge. Unfortunately some learners do not go beyond the surface of the text, that is, they become bound to single words.

These learners cannot construct the meaning of the text, because they do not have the prerequisite prior knowledge. Since background information determines the levels of comprehension, learners' knowledge gaps become stumbling blocks to understanding texts (Pearson & Johanson, 1978).

Semantic mapping, a simple technique of structuring information in graphic form, is therefore seen as the most appropriate technique to combine reading and critical thinking (Hanf 1971:226; Sinatra et al., 1984:22;). Used as a study technique, semantic mapping is said to be worthy of careful consideration for increasing reading comprehension and retention (Hanf, 1971:225).

It has also been demonstrated as a successful technique that can help learners use their prior knowledge in comprehending what they read (Heimlick & Pittelman, 1986; Novak, 1986;) and by so doing, applying both Schema Theory and Psycholinguistic Models in the classroom (Antonacci, 1991).

For ESL students who fail their other courses as they have the extra burden of the unfamiliar language used, semantic mapping may be a solution as it links what they know to the unknown thus lessening their language burden.

#### **4.2 What is semantic mapping?**

Hanf (1971:225) describes semantic mapping as a graphic representation of information as it is a verbal picture of ideas organised and symbolised by readers. It has also been described as a visual representation of knowledge, a picture of conceptual relationships, a pulling together of thoughts and knowledge and a knowledge map that allows the scanner to view a range of ideas (Novak, 1986:28).

Semantic mapping can also be regarded as an exercise in critical thinking as it demands the reader's insightful judgements and discriminating decisions about the material (Hanf, 1971:227).

The reader has to decide the map's starting point by locating the main idea and determining principal parts. After labelling these parts, he connects them with the main idea. He now has a picture of the basic structure of the material. The next step is adding the supporting details (Heimlick & Pittelman, 1986:51). One cannot make a map without being keenly involved in critical thinking (Murray & Johanson, 1989:37). It is as a result of judgements and decisions made by the reader that semantic mapping was approved as an interactive approach between the reader and text by which meaning is found and created.

It has also been labelled "concept mapping" as it represents concepts and propositions a person holds (Novak, 1986:30), as well as semantic webbing, semantic networking or plot maps (Heimlick & Pittelman, 1986:52).

### **4.3 What semantic mapping entails**

Generally speaking, semantic mapping involves selecting key-context from passages and representing it in some sort of visual display in which relationships among the key ideas are made explicit (Novak, 1986:17).

The procedure generally includes a brain-storming session in which students are asked to verbalise associations with the topic or stimulus words as the teacher maps (categorises) them on the board. This phase of semantic mapping provides students with an opportunity to engage actively in a mental activity which retrieves stored prior knowledge and see the relationships among words (Murray & Johanson, 1989:40).

Through discussion, students can verify and expand their own understanding of the concepts. They relate new concepts to their own background knowledge, thus promoting better comprehension (Uttero, 1988:392).

Brain-storming can also bring to light incorrect concepts and stimulate pupils' imagination and creativity (Murray & Johanson, 1989:47). It is also an excellent technique to use in problem solving.

A completed semantic map provides students with a means for both activating and enhancing their knowledge bases regarding the specific topics and words discussed (Novak, 1986:207). Semantic mapping results in a categorical structuring of information in graphic form. The map displays known and new words under labelled categories or conceptual subtopics.

In addition to being an effective technique for vocabulary development, semantic mapping is a good alternative to traditional activities used before reading a new passage (pre-reading) as well as after reading a passage (post-reading) (Uttero, 1988:391). In this application, the semantic mapping process not only introduces key-vocabulary from the passage to be read, but it activates the readers' prior knowledge of the topic, thereby preparing them better to

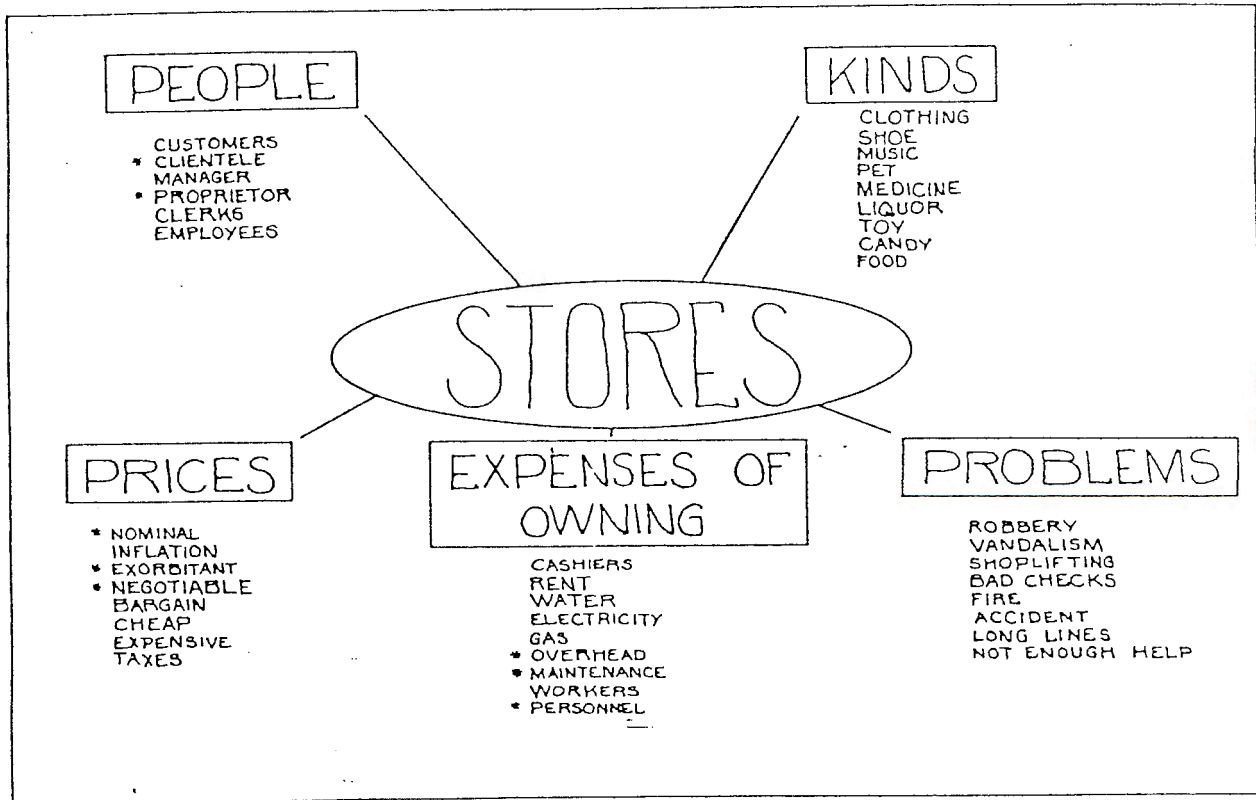
understand, assimilate and evaluate the information in the material (Heimlich & Pittelman, 1986:86).

Following the reading of selected texts, discussion of semantic maps can be refocused to emphasize the main ideas presented in the written material. During this application, the procedure draws heavily on the activation of prior knowledge.

The semantic map can therefore be said to contain five components, namely:

- a Important events, points or steps which lead to the main idea or lesson itself.
- b The main idea itself.
- c Other viewpoints and opinions of the reader.
- d The reader's conclusion upon reading the passage.
- e Any relevance the reader perceives for a contemporary situation (Heimlick & Pittelman, 1986; Novak, 1986).

Table 1 contains an example of a semantic map introducing learners to new terminology based on the assumption that people tend to remember words in groups which are meaningfully connected.

**Table 1: Classroom map for stores**

(Heimlick & Pittelman, 1986:15)

This map is concerned with development of ideas based on a specific topic. It shows not only key issues related to the topic but supporting ideas as well.

#### 4.4 Uses of semantic mapping

Through its brain-storming phase, semantic mapping introduces new words to students and demonstrates the link between these words and those that they already know, thus relating new concepts to their own background knowledge and therefore promoting better comprehension (cf. Chapter 2).

Brain-storming can also bring to light incorrect concepts and stimulate students' imagination and creativity. This happens as groups of words are classified (Heimlick & Pittelman, 1986:11).

A completed semantic map provides students with a means for both activating and enhancing their knowledge basis regarding specific topics discussed. It results in categorical structuring of information in graphic form which helps in understanding these topics better (Murray & Johanson, 1989:4).

Semantic mapping can also be used to illustrate the "hierarchical nature of an argument" (Murray & Johanson, 1989:26). Contrary to use of visual cues, semantic mapping is an aspect that emphasizes an equal measure of contribution of main ideas, supporting ideas and the use of linguistic signals in a development of arguments. Through a semantic map, a learner is forced to pin-point these.

Mapping also increases reasoning ability as reading is essentially a language-thought activity. Thorndyke (1977) wrote of "reading as reasoning" saying that the reader has to use the same sort of organization and analytical action of ideas as occurs in thinking of supposedly higher sorts. Mapping is therefore considered an exercise in thinking which cannot be performed without the active intellectual anticipation of the students.

Mapping is also said to improve memory as researchers argue that the proper business of school is to teach students to think. The map is a structured pattern and all details are neatly connected to larger units. When the reader designs the basic structure, that is the main idea and the secondary categories, he has apprehended all the information he needs to remember.

Mapping develops critical thinking (Hanf, 1971:229). This is done through constructing and creating the organizational design of ideas, selecting information that is relevant and sorting each bit of information into its proper place, relating all the facts to the whole and relating facts to other facts as well as responding with personal reaction to the material.

Semantic mapping can also be used to help learners organize ideas prior to writing or reading activities both in language arts classes and in content areas (Novak, 1986:6). As in story and report writing, semantic mapping helps the student organize thoughts and information. A complete map may serve as a guide by which to structure a story with the category headings

serving as topic sentences or main ideas for the paragraphs and the underlying details serving as the content to be included.

Semantic mapping also works effectively both in pre-and post-reading situations. In pre-reading application, students develop a map of the topic of a story in order to:

- a Learn the key vocabulary words, and
- b activate their prior knowledge on the story topic (Heimlich & Pittelman, 1986; Murray & Johanson, 1989; Novak, 1986).

As a story unfolds, or afterwards, readers can add words and new categories to their own copies of the map. In the final phase of the procedure, which is a class discussion, an opportunity is provided for the identification and integration of the new information. The class discussion can also serve as a comprehension check for the teacher. As a post-reading activity, semantic mapping affords readers the opportunity to recall, organize and graphically represent the pertinent information that has been read (Novak, 1986:6).

A wide variety of reading skills may also evolve from semantic mapping. The following are some of these:

- i It is an effective technique for helping children identify and discuss issues contained in their books.
- ii Through use of semantic webs children are encouraged to express their ideas.
- iii They are helped to perceive relationships and perceive their thought.
- iv Re-reading is made more purposeful and retelling of stories is enhanced.
- v When students read stories themselves, they may develop skills for locating ideas (Heimlick & Pittelman, 1986; Murray & Johanson, 1989; Novak, 1986).

#### **4.5 Conclusion**

Because of the influence of both Schema Theory and Psycholinguistic Models on teaching in general and especially on reading, educators and researchers have given attention to the instructional technique of semantic mapping.

Semantic mapping is not new; it has been around for years under various labels like "semantic networking" or "plot maps". The value of semantic mapping, however, has only recently been recognized because of an increased understanding of the important role that prior knowledge plays in the reading process.

The semantic mapping process influences learners to become active readers by triggering the brain to retrieve what it knows about the topic and to use this information in reading. This activation of prior knowledge is critical to reading comprehension.

While the semantic mapping procedure may vary according to individual teacher objectives, the procedure generally includes a brain-storming session in which students are asked to verbalise association(s) with topic or stimulus words as the teacher maps (categorizes) them on the chalkboard. This phase of semantic mapping provides students with an opportunity to engage actively in a mental activity which retrieves stored prior knowledge and to see graphically the concepts they are retrieving. Through discussion, the learners can verify and expand their own understanding of the concepts. They relate new concepts to their own background knowledge, thus promoting better comprehension.

Semantic mapping can also be used effectively in both pre- and post-reading where, besides introducing key vocabulary words from the passage to be read it also provides the teacher with an assessment of the learners' prior knowledge or schema availability on the topic. This stage helps learners focus on relevant schema, better preparing them to understand, assimilate and evaluate the information in the material to be read. After reading selected texts, a discussion of the semantic map can be refocused to emphasize main ideas presented in the written material.

In the final phase of the semantic mapping procedure, which is a class discussion, there is an opportunity for the identification and integration of the new information. This class discussion can also serve as a comprehension check for the teacher. As a post-reading activity, semantic mapping affords students the opportunity to recall, organize and represent graphically the pertinent information read.

Semantic mapping can also be used as a study skill technique where it can be used as an advanced organiser, enabling better comprehension as well as being an effective substitute for the traditional note-taking and outlining procedure. In this instance, it can be used either with individuals or groups and is useful in both reading and content areas.

All these uses and the fact that it is extremely versatile make semantic mapping very different from other teaching and study techniques and make it an indispensable tool in the modern classroom.

## **CHAPTER 5**

### **METHOD OF RESEARCH**

#### **5.1 Introduction**

The methodology employed in this study is discussed under four main headings:

- \* the subjects
- \* the instruments/materials used in this study
- \* how the data were collected and administered, and
- \* the design and statistical analysis techniques used in this study.

#### **5.2 Subjects**

The accessible population comprised 120 first-year students taking the Special English course at the College of Nursing in Mmabatho. In order to prevent disruption of classes two intact classes were randomly assigned to either the experimental group (n = 60) or to the control group (n = 60). The students are fairly homogeneous in that they come from similar backgrounds. However, these students represent a wide range of abilities (i.e., their level of English proficiency may differ).

#### **5.3 Variables**

The dependent variable is ESL reading comprehension as measured by reading comprehension tests. The independent variable is the teaching of semantic mapping.

#### **5.4 Instrumentation**

Four reading comprehension passages were used in this study. Each passage was accompanied by reading comprehension questions. In addition to the comprehension questions the experimental group also received instruction in semantic mapping. The first and the last two reading passages served as the pretest and the posttests, respectively.

## 5.5 Data collection procedure

The study was conducted at the beginning of the first semester. The tests and practice sessions took place during the students' regular 40 minute class periods. All treatments and tests were administered by the researcher. The tests were administered on the same day (i.e., for the experimental group and the control group) but in two consecutive periods.

Both groups were administered a pretest that consisted of prereading activities, reading of a passage until it was understood, and writing a comprehension test without looking at the passage. The tests, devised by members of the Special English Unit at the University of Bophuthatswana, were based on articles from the following magazines and newspapers:

- a) *Reader's Digest* (1991)
- b) *Forum* (1991)
- c) *The Star* (1992, 1993)

Students read the passage, then answered comprehension questions based on them. These included especially identification of main ideas and supporting ideas. They were also asked to summarise these passages (cf. Appendix A).

### *Treatment: Experimental Group*

Treatment consisted of drawing students' attention to the main ideas as well as the supporting ideas in the text passage and showing them how these "factors" can be represented by means of a semantic map (cf. Appendix B for an example). The main purpose was to help students to relate the map to the text passage and to ensure that they were alerted to the map and forced to interact with it. The students received practice in semantic mapping. The treatment lasted for a period of two months.

### *Control group*

The control group received exactly the same passages. However, they did not receive (instruction in the use of) semantic maps. This group interacted with the material by answering questions.

The posttests (cf. Appendix C) were administered to both groups on the same day, but in consecutive periods. Both groups received passages similar in text structure and difficulty to the passages in the pretest and the practice session. The conduct of the test in each group followed the same procedure as the treatment and practice session for the same group. The two groups were allowed the same time to complete the test. The second posttest was administered one month after the first posttest.

## **5.6 Analysis**

The data were analysed by means of SAS statistical programmes (SAS Institute Inc, 1988).

A t-test was used to compare the mean scores of the two groups in order to determine whether the means differed statistically significantly from each other (cf. De Wet et al., 1981:212).

A relationship can be regarded as statistically significant if the results are significant at the specified alpha (i.e., probability of chance occurrence). Alpha is established as a criterion and results either meet the criterion or they do not. In behavioural research, alpha is frequently set at  $p < 0,05$  or  $p < 0,01$  (i.e., the odds that the findings are due to chance are either 5 in 100 or 1 in 100) (cf. Thomas & Nelson, 1990:100-102). A relationship can be regarded as practically significant if the results are of practical value to the researcher, language practitioner or teacher. Cohen (1977) has established various scales according to which a relationship or difference between means can be regarded as practically significant. Cohen's (1977:20-27) effect size  $d$  was used to calculate the difference between two means. Cohen uses the following scale for the  $d$  values:

Small effect - 0,2

Medium effect - 0,5

Large effect - 0,8

Cohen's (1977: 20-27) effect size  $d$  was also used to calculate the difference between the means within groups. Cohen uses the following scale for calculating  $d$  values within groups:

Small effect - 0,15

Medium effect - 0,35

Large effect - 0,60

## **5.7 Conclusion**

In this chapter the research methodology employed in the study was discussed. A complete outline of the steps involved in the study will enable future researcher to replicate similar studies.

## CHAPTER 6

### DISCUSSION OF RESULTS

#### 6.1 Introduction

This chapter is devoted to the presentation and discussion of the analysed data. The aim with this chapter is to attempt to answer the question posed in chapter 1:

- \* Does direct strategy training (specifically semantic mapping) enhance ESL reading comprehension?

#### 6.2 Determining the effectiveness of semantic mapping

Table 2 presents the descriptive statistics (within groups) for the experimental group and the control group.

**Table 2. Descriptive statistics (within groups) for the experimental group and the control group.**

Variable	Group	N	X	SD	p	d
Prepost 1 +	E	60	2,23	2,51	0,0001**	0,66+
Prepost 2	E	60	4,78	3,88	0,0001**	
Pst1Pst2	E	60	2,55	2,14	0,0001**	
Prepost 1	C	60	0,27	1,62	0,21	0,30+
Prepost 2	C	60	0,75	1,80	0,05*	
Pst1Pst2	C	60	0,48	1,23	0,05*	

Key:

Statistical Significance

\*  $p < 0,05$

\*\*  $p < 0,0001$

Practical Significance

+ Medium effect

++ Large effect

Pre-Post 1 = difference between the pretest and the first posttest

Pre-Post 2 = difference between the pretest and the second posttest

Pst 1 Pst 2 = difference between the first posttest and the second posttest.

E - experimental group

C - control group

N - number of subjects

X - mean

SD - standard deviation

Within the experimental group the results indicate a statistically significant difference between the pretest and the first posttest ( $p < 0,0001$ ) as well as a statistically significant difference between the pretest and the second posttest ( $p < 0,0001$ ). Within the experimental group it would seem as if the treatment (i.e., the teaching of semantic maps) was highly successful. A statistically significant difference was also found between the first posttest and the second posttest ( $p < 0,0001$ ). This would seem to indicate that as the subjects became more adept at using semantic maps their performance on the reading comprehension test improved. In addition, the difference between PrePost 1 and PrePost 2 was also practically significant ( $d = 0,66$ ), indicating the effectiveness of semantic mapping within the experimental group.

Within the control group the results indicate that the difference between the pretest and the second posttest was statistically significant ( $p < 0,05$ ) (cf. Table 2). The mean difference between the first posttest and the second posttest also differed statistically significantly ( $p < 0,05$ ). The reason may be attributed to "practice effect" (i.e., as the subjects practice more they ought to improve). However, the difference between PrePost 1 and PrePost 2 was not practically significant ( $d = 0,30$ ). It would, therefore, seem as if there was a very slight improvement, not practically worth noting, in the performance of the students in the control group.

A t-test was used to calculate whether the differences between the experimental group and the control group were statistically significant (cf. Table 3). The results indicate that the differences between the two groups were statistically significant in terms of the difference between PrePost 1 ( $p < 0,0001$ ), PrePost 2 ( $p < 0,0001$ ) and Post 1 Post 2 ( $p < 0,0001$ ). Cohen's (1977) effect size  $d$  indicates that these differences were also highly practically significant, namely PrePost 1 ( $d = 0,78$ ), PrePost 2 ( $d = 1,04$ ) and Pst 1 Pst 2 ( $d = 0,97$ ) (cf. Table 3).

**Table 3: A comparison of the mean performance between groups**

Variable	Group	N	X	SD	p	d
Prepost 1	E	60	2,23	2,50	0,0001*	0,78+
	C	60	0,26	1,62		
Prepost 2	E	60	4,78	3,88	0,0001*	1,04+
	C	60	0,75	1,80		
Pst1Pst2	E	60	2,55	2,14	0,0001*	0,97+
	C	60	0,48	1,22		

Key:

Statistical Significance

\*  $p < 0,0001$

Practical Significance

+  $d > 0,80$  (Large effect)

PrePost 1 = difference between the pretest and the first posttest

PrePost 2 = difference between the pretest and the second posttest

Pst 1 Pst 2 = difference between the first posttest and the second posttest.

E - experimental group

C - control group

N - number of subjects

X - mean

SD - standard deviation

The results seem to indicate that the hypothesis stated in section 1.3 can be accepted (within the context of this study). It would seem as if semantic mapping can be considered an effective memory strategy which can help improve students' ESL reading comprehension ability. The results do not, however, provide the ultimate answers for improving ESL reading comprehension ability. Various factors could have influenced the results, such as sample size, sampling error, etc. The results indicate that by introducing semantic mapping as a memory strategy students can at least start to help themselves.

### 6.3 Conclusion

The results of the study may not have been unexpected. Researchers may have concluded that graphics can help learners overcome some of their difficulty with language by providing information in a form they can handle more easily. Teachers may have been aware always anyway that graphics can lower the language barrier and thus provide comprehensible input for students who learn English as a second language. Indeed, educators and ESL teachers have suggested that an effective way to teach useful or interesting information to ESL students is to use visuals and graphics (i.e., semantic mapping) (cf. Mohan, 1986). It is considered that the findings of this study have contributed to ESL pedagogy by giving tangible evidence of the positive reaction of students to semantic mapping. If semantic mapping can help comprehension, it has great potential for helping ESL students to gain access to school knowledge and at the same time to facilitate the acquisition of a second language for academic purposes.

## CHAPTER 7

### CONCLUSION AND RECOMMENDATIONS FOR RESEARCH

One of the most important activities, if not the most important one in tertiary education, is reading; reading not for pleasure but for information that has been researched, organized and documented in accordance with the rules of academic discourse. Students at the College of Nursing in Mmabatho experience problems with regard to various aspects of academic reading, for example, identifying main ideas and supporting details in a passage. The reading activity is a complex psycholinguistic task, therefore teachers need to focus on strategies which can help improve the academic reading ability of their students. This study focuses on a direct strategy training programme of reading in English as a second language. It is designed to address the following research question:

*Does direct strategy training (specifically semantic mapping) enhance ESL reading comprehension?*

The results of this study indicate that there is a statistically significant ( $p < 0,0001$ ) as well as a practically significant ( $d > 0,8$ ) difference between the pretests and posttests of the experimental and control groups (cf. Table 3). It would, therefore, seem as if semantic mapping can be considered a very effective strategy for improving the ESL reading comprehension of the students at the College of Nursing in Mmabatho. The findings of this study have contributed to ESL pedagogy by giving tangible evidence of the positive reaction of students to semantic mapping.

If ESL teachers recognize the value of graphic representation of knowledge structures as a teaching/learning strategy and the fact that they have an important role to play in making graphics work for ESL students, and if they take active steps to bring the technique to the classroom, they might be able to contribute to the learning of school knowledge and the acquisition of a second language for academic purposes by ESL students.

Nevertheless, the topic needs further research. Content-area reading comprehension and ESL pedagogy would benefit from a systematic programme of research to explore the value of various graphic forms, graphic functions, and knowledge structures in student learning. Researchers need to study the extent to which specific graphic representations are compatible with certain text types; to discover if there are

differential effects with different language groups; and to find out how different variables, such as length of residence in foreign country, proficiency level, age, and level of first language education, interact with graphics. Moreover, longer-range persistence of the effect should be taken into account. To avoid disrupting the class for too long, the topic and its related issues should, perhaps, be studied by classroom teachers themselves, who can incorporate the techniques into their teaching.

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## **APPENDIX A**

### **DOES AFFIRMATIVE ACTION REALLY WORK**

When it was introduced in America, its intent was to ensure that every American would have an equal chance at obtaining education and jobs. But affirmative action has moved from "colour-blind" hiring to the pointed consideration of race. Those who have been passed over have responded with anger and bitterness.

The dissatisfaction, however, goes beyond those who feel they have been deprived of a job, a promotion or admission to a university. While many minority Americans continue to support affirmative action, others are uneasy about it. Some doubt the policy's success; some are convinced it does great long-term harm. Here is a sampling of their experiences that may provide food for thought for us in South Africa.

#### **The Minister**

BUSTER SOARIES was rushing to catch a plane. The year was 1975, and at 24 he was already national field director of black civil rights activist Jesse Jackson's Operation PUSH (People United to Serve Humanity). Committed to helping his fellow blacks, Soaries was absorbed in Jackson's brand of affirmative action.

As he headed for the door of his New Jersey flat, the phone rang. His father, just admitted to hospital for minor surgery, had suffered a complication. At 48, he was dead.

For the next six months, Soaries did what his father no longer could - pay accounts, run his mother's house, be a "dad" for his eight-year-old sister. In doing so, he came to understand the lessons of his father's life - and the limitations of his own work.

Own week before he died, Soaries's father had reviewed the family's finances with Buster and given him detailed written instructions. Everything was in perfect order. Now he marvelled: "The values Dad gave me were the basis of success," Soaries says. "That with discipline, you can prosper in any circumstances; and without it, the best of circumstances won't help you."

As a boy, he had chafed at his parents' strict moral code. Yet he bristled when his father was denied service in a restaurant. In high school by the late 1960s, Soaries was swept up in the nation's racial turmoil.

In 1973 he landed at PUSH, which was using boycotts to pressurize businesses to employ blacks. Initially excited, Soaries soon saw PUSH's weaknesses. Some companies left town instead of signing "arguments" under duress - a net loss for everyone. When others did sign, the agreements couldn't create black workers to do the job.

Soaries's discomfort increased on visits to housing estates, where he saw undisciplined children and disrespect for property. Thus when his father's death raised "life-size questions," Soaries was ready. He left PUSH to found the New Jersey Leadership Institute, which taught minority kids the skills and personal habits of a working life. He was ordained in 1977 and now heads the First Baptist Church of Lincoln Gardens in Somerset, New Jersey.

Last year, President George Bush met with Soaries and other black leaders to discuss a bill that would tighten affirmative action laws. Soaries made some others angry when he told the President: "In our community, we have 50-per cent school dropout rate. This bill won't change that".

Says Soaries today: "When people are afraid to vote because of crime and when more teenage girls than married women are having babies, affirmative action is no longer the way to save black America." His brow furrows in anger. "I don't know how we got this far off track with this talk about affirmative action. I really don't."

### **The Engineer**

"Why do we have to stand here in the sun while the other children eat inside with their parents?"

The summer heat was sweltering outside the little restaurant. But Willie and Rasa Wilson, embarrassed, had no answer for their son David other than "coloured people are not supposed to go in there". Discrimination against blacks was the law in postwar Loris, South Carolina, and their education had not prepared them for sophisticated explanations. David's parents had left school in the equivalent of standard one, when poverty forced them into the grinding labour of sharecropping.

The unanswerable mystery of segregation left a mark on young Wilson - a mark of doubt. May be, he feared, black people were not as clever as white people. If I can't share a hotdog stand or a classroom with a white child, there might be a reason.

This doubt ended for ever when Wilson joined the army in 1963. For the first time he could match wits with whites on an even footing. He received telecommunications instruction in fully integrated classrooms. "I realized I was scoring just as well as Caucasian people," he recalls. "So I said to myself, they are no better. From that day on, I never questioned my ability to compete with anybody."

After the army, Wilson worked his way up through a series of jobs in the defence industry. He earned a technical diploma in electronics, plus a degree and a master's in electrical engineering.

Today he is an electrical engineer for IBM in New York. In 1985 Wilson started a programme that tutors blacks and Hispanics in maths and science. Three years later, IBM agreed to fund the project.

Wilson, 49, thinks often about what he wants for those kids - and for his own two sons as well. Always, he stops short of concluding that affirmative action should end. He remembers segregation and fears that without a special policy it would come back. "It's like a medication", he says. "A person takes it and feels better and thinks he's OK without it. But when he stops taking it, he goes back downhill."

Yet when Wilson reflects on his own life, he is glad he had no help from affirmative action. Had the army offered him a boost to compensate for the disadvantages in his past, the lesson that he learnt there "would not have been the same. I would still think there must be a secret; I would still have had that doubt. But there was no special advantage, and it really was the turning point for me".

### **The Businessman**

JAMES LOWRY first benefited from affirmative action in 1952. The son of postal workers, he was recruited to become one of the first black pupils admitted to an elite private school in Chicago.

Whatever awkwardness Lowry felt when he first mingled with his affluent white classmates is not far behind him. Today he is president and chief executive officer of James Lowry & Associates, a 25-person consulting firm. And Lowry gives much of the credit to affirmative action. After attending private school, he says, the policy helped admit him to university, where he completed an honours degree, and into his first consulting job and an advanced programme at Harvard University.

At university, Lowry ran several businesses, including a coin-operated laundry and a sandwich service. But years would pass before he considered an entrepreneurial career. A year in Tanzania on a fellowship, five years with the Peace Corps and his degree would come first.

Then in 1968, Lowry took a job with a nonprofit organization in a New York ghetto. The spectacle of the government giving money to blacks unprepared to earn or manage it convinced Lowry that what blacks really needed was to learn to contribute economically.

Later that year McKinsey & Company, a prestigious international consulting firm under federal pressure to hire black professionals, recruited Lowry. The match was good, for him and the firm.

Still, Lowry knows affirmative action recipients have floundered elsewhere. The policy has left white bosses dissatisfied and minority employees stuck beneath a "glass ceiling" above which they are seldom promoted. As a business consultant, Lowry has seen many such situations close up, and he holds both blacks and whites responsible.

Whites - fearful of lawsuits - are to blame for failing to criticize unsatisfactory black employees. All employees need constructive criticism to know what their bosses want. And Lowry blames some black employees for too often failing to "produce on time, take stuff home, do those things necessary to win"

Lowry, now 52, thinks tough competition from other countries is radically altering American business. If minority workers are to survive the change, he says, there will have to be fewer lawsuits to bosses can demand a high performance from all their employees, including blacks. And young blacks must actively seek to meet employers' needs.

However, Lowry believes affirmative action must remain. "Racism is not as bad as when I was growing up," he says. And one reason is that affirmative action helped blacks move into every job and profession. Lowry adds that there will always be those who will attach a stigma to people hired under affirmative action. His reaction: "So be it. Take the opportunity. And then, so you can look yourself in the mirror, do the best you can".

### **The Fireman**

"You'll never get in, because you're Chinese." Those were the words Roland Lee heard from his father when he sought to join the San Francisco Fire Department in 1971.

As a Chinese-American, Lee's father knew real racial prejudice in the 1930s and 1940s. But Roland, born in 1948, had a different experience. There had been occasional fights with whites who called him names, but he had never felt that discrimination blocked his ambitions. So, while attending university, Lee took the fire department's employment test. In 1974 he was hired - one of the first Asians on the force.

Lee's first years were as great as he had hoped. He remembers his excitement when he first saved a life. He relished the camaraderie, the fooling around, the underlying trust. "What made it so good," he says. "was mostly the people."

But that began to change in 1978, when the San Francisco Black Fighters Association - eventually joined by groups representing Hispanics, women and Asians - started challenging the department's entrance and promotion exams. They claimed minorities scored poorly because the tests measured technical knowledge and "rote memory" instead of "job-related" skills like leadership. As a result of the challenges, promotions in the fire department are currently determined not by highest test scores but by the courts.

The promotions are carefully balanced by race.

The department had been hiring by affirmative action since 1971, and that policy had ruffled feathers. But promoting by affirmative action affected opportunities for men who knew one another and worked together, and that had a toxic effect on life in the fire stations.

Today race-based promotions have left white firemen with little chance of upward mobility. As a result, Lee says, many are angry. Some whites won't even speak to minority firemen.

Even among minorities, relations soured. The groups challenging the promotion tests made the "discriminatory environment" of the department part of their suit. To build this case, Black Fire fighters Association members were told to report racial harassment. In 1988 some 300 such charges were filed covering the period from 1981 through 1987. Even those eventually exonerated felt their morale unstrung and their careers threatened. Lee himself was the victim of a baseless charge of sexual harassment. "Such allegations can mess up somebody's reputation for ever," he says.

In June 1988 Lee was among those promoted by the court. He believes he deserved the move, yet can't fully enjoy it. He says. "It's like, here's your new job, but we're tying all this other rubbish on to it".

Lee is faced with a dilemma. He recalls his father's plight and wants the fire department to be integrated. But affirmative action? "I don't know if there's any ultimate justification for it," he says.

**COMPREHENSION QUESTIONS**

- 1 On the basis of the content of this article, which alternative title do you think can be most suitable? Support your answer.
- 2 Which, in your opinion, is the sentence that best summarises this passage?
- 3 Write either a set of notes or draw a mind-map showing clearly main ideas and relevant supporting details of this article.
- 4 What, in your opinion, is the attitude of the writer towards his subject matter? Is he describing, criticising, certain or uncertain? Support your answer.
- 5 There are six different paragraphs, each one with its own main purpose. These are:
  - i Information paragraphs that inform you about the subject matter.
  - ii Thesis/proof paragraphs that convince you to believe.
  - iii "How to" paragraphs that tell you step-by-step how something is done.
  - iv Definition paragraphs that explain things to you.
  - v Story paragraphs that tell you in a series of events what happened to someone.
  - vi Problem paragraphs that discuss a problem, including its cause and/or its solution.

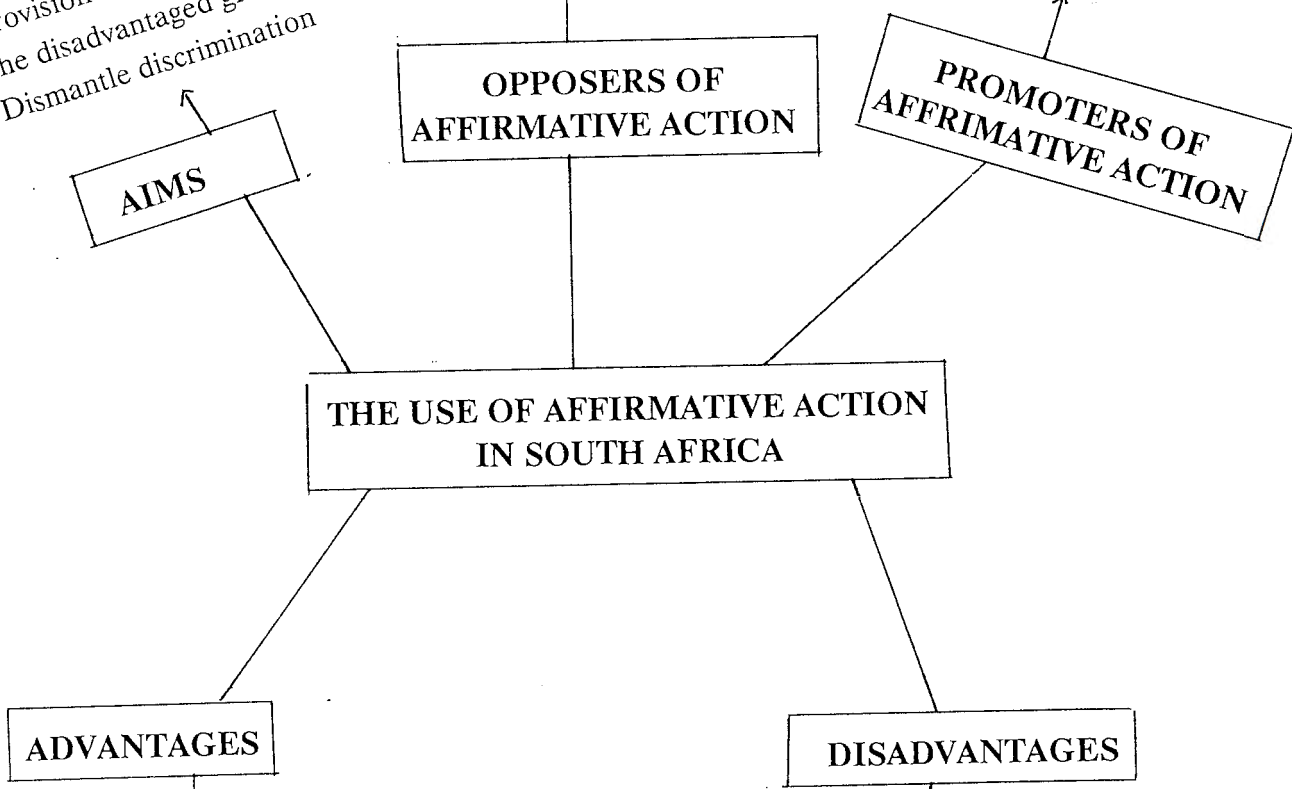
On the basis of this information, name different paragraphs of this article and support your answers.

APPENDIX B: Semantic map

- Address historical racial and gender inequalities
- Provision of fair equality of opportunity for all
- \* End of tokenism
- \* Provision of skills for the disadvantaged groups
- \* Dismantle discrimination

- \* Some political parties
- \* Individuals
- \* Businessmen
- \* Whites

- \* Different political parties
- ANC
- INKATHA
- DEMOCRATIC PARTY, etc.
- \* Businesses
- \* Individuals



- \* Upliftment and empowerment of the disadvantaged minority
- \* Provision of opportunities to all
- \* End of preferential treatment/tokenism
- \* Reduces discrimination in all its forms

- \* Concentrates on certain groups: "reverse discrimination"
- \* Places individuals at jobs that they do not deserve
- \* Disregard for individual efforts
- \* Harmful to the economy
- \* Frustrates both employers and employees
- \* Promotes corruption

**APPENDIX C: Comprehension Test: Posttest (1)****"VICTIMOLOGY" AND OTHER PERILS OF AFFIRMATIVE ACTION**

Nigel Lawson, the politically brilliant and acerbic former Chancellor of the Exchequer in Britain, once dismissed his Labour Party opponents by saying that

"To be in opposition is to promise, To govern is to have to choose".

In South Africa, we are lit by explosive forces declining in come massive joblessness, inflation given increases in prices and the normal tax rates and sky-rock crime which have now reacted combustion point.

It is clear that the liberation parties will add another combustible ingredient - heightened expectations. They will contest a future election flourishing an endless list of promises that will expect quick fulfilment in the New South Africa. However, when these political promissory notes come to be honoured, it will be found that they flatter only to deceive, so that in order to spread wealth and opportunity, it must first be created and disbanded. Then the very institutions that offered deliverance, such as Parliament and the courts, will be undermined when unable to provide what the politicians promised.

While blaming apartheid is often as accurate analysis of our past it is reaching proportions of a national pastime suggesting that the Left's agenda in the New South Africa will be a sort of 'victimology' when creating a multiplication of rights and a withering of duties and obligations. The most obvious manifestations of this tendency is the tripwire of affirmative action, which the ANC for example, presents as a panacea for post-apartheid South Africa.

The ANC goes beyond simply suggesting affirmative action as one of several devices that might be useful in the quest for a society founded on opportunity and unshackled from its racist past.

The ANC Bill of Rights states: 'Nothing in the constitution shall prevent the enactment of legislation or the adoption by public or private body of special measures of a positive kind designed to procure the advancement and the

opening up of opportunities including access to education, skills, employment and land and the general advancement in social economic and cultural spheres of men and women who in the past have been disadvantaged by discrimination'.

Thus the principle of affirmative action will be the most significant right, trumping all other in an ANC South Africa since any legislation or practice committed in the name of reverse discrimination will be accord to constitutional preference over other perhaps more fundamental rights.

The South African Law Commission's recently published revised Bill of Rights delivered a slap to these proposals stating that it was unacceptable to take things away from one person and give them to another and equally unacceptable that some people could be favoured at the expense of others.

No doubt, carefully applied and wisely executed, affirmative action is a necessary policy to help level the playing fields of South Africa in degrees and on a wider scale that, realised, it is already being applied most notably in our universities and at various management levels of business. Quite clearly, the civil service desperately needs to make race one of several sectors in its recruitment and emotional practices, since race has been a factor in exclusions from state employment.

However, we should learn the lessons of social engineering gone awry by studying recent lessons from the American experience.

US Associate Justice Clarence Thomas was heavily criticised for his 1985 commencement address to black graduates when, instead of telling them how tough he had it as a student in overcoming racism, he advised his audience: "You all have a much tougher road to travel. Not only do you have to contend with ever present bigotry, you must do so with a recent tradition that almost requires you to wallow in excuses."

The revisionist opposition to affirmative action there is classically liberal, since it questions policies that concentrate less on individual opportunity and more on group outcome.

One cynic dismissed the entire exercise on the basis of the rationale that "since race discrimination favoured whites in the past, justice demands pro-black unfairness now". A question that Americans consider relevant today, and South Africans must almost immediately confront, is whether such policies will allow their country to be globally competitive against ruthless trading rivals such as Japan and the Pacific Rim countries, where social engineering of this kind is dismissed as accidental nonsense.

The extreme, and most controversial form of affirmative action, is so-called "race norming". Thirty-eight state employment services in America are currently using this device, which is the process of adjusting raw test scores within racial groups to compensate for low minority test results (from Hispanics and blacks). The rationale behind it is the allegation that any tests that emphasise logical, analytical methods of problem-solving will be biased against such minorities.

The most eloquent denunciation of race norming came from the pen of black journalist Colbert King: "This comes dangerously close to suggesting that when blacks are called upon to demonstrate, through examination, their ability to reason objectively and methodically, they can be expected to come up short. That is precisely the stereotype and racist caricature that bigots have always tried to project".

While affirmative action has certainly materially advanced minorities in America, it is the single issue that is central to understanding racial tensions in that country: a cautionary note, perhaps, as we embark on our own hazardous journey of reconciliation and reconstruction.

**COMPREHENSION QUESTIONS**

- 1 Give synonyms of the following words used the passage
  - a) Victimology
  - b) Panacea
  - c) Explosive forces
  - d) Combustion points
  - e) Combustion ingredient
- 2 The writer seems not to believe that affirmative action will solve South Africa's problems. Give his reasons and respond to them.
- 3 In what way(s) does the writer think that South African problems are similar to those of America?
- 4 On the basis of the content of this article, do you think that affirmative action has disadvantages? List them.
- 5 What do you think are the advantages of affirmative action?
- 6 The writer seems to think that affirmative action is just one of several devices that could help solve South Africa's problems. What other devices does he mention?
- 7 US Associate Justice Clarence Thomas criticises Americans for "wallowing in excuses" instead of seeking other means to solve their political problems. Do you think this is the case with South Africans? Elaborate.
- 8 On the basis of the content of this article, what do you think affirmative action is?
- 9 In the above 6-10 sentences discussed, what do you understand by the Left's agenda being a sort of "victimology"?

- 10 What does the writer feel about the Left's agenda and why?
- 11 "To be in opposition is to promise".
  - a. What do you understand by this statement?
  - b. Do you think this is the case in South Africa?

## **APPENDIX C: Comprehension Test: Post-test (2)**

### **YOUNG, BLACK AND TOKEN?**

Too many black professionals let themselves be used to fill corporate quotas. Instead of challenging work, many find boredom and are sidetracked from the important task of bettering their communities.

For reasons that have a lot to do with the fact that I am a young black professional, I have agonised over the question of how my peers serve this country. Here I concern myself with young black professionals - the sorts that earn five-figure salaries, drive posh company cars, own homes in previously whites-only suburbs, pay rent and open accounts for their mistresses, have an entertainment allowance, hold fancy job titles.

My focus on the role of black professionals emanates from trends and events I have observed and perceived in our evolving society; from the insecurity and paranoia of white management and their senior black cohorts; from the dissatisfaction and frustration of witnessing the aversion of African potential; and from the febleness and directionlessness of my contemporaries' careers.

I'm not putting the spotlight on successful black professionals for personal gain or glory or out of jealousy. I have taken this stance because I consider it essential to sensitise my peers to the abyss that they are leading the country to. I would like to see young black professionals become more open about their role, redefine their responsibility and become more relevant to the challenges that lie before us.

As a young black man, I enjoy it when I see our own people advance themselves so they can be of more effective use to the nation and thus secure a more desirable future for themselves. But the question that I have had to ask myself over the past few years is: "what is the contribution of young black professionals to changing this country?". This is the question that brought me to frustrations bordering on despair.

The temptation is indeed strong to answer that question in one word: **NOTHING!** but such an answer would be too simplistic - neither wholly true

nor very helpful. A satisfactory answer has to be a little more complex, had to be hedged in here and there by exceptions, qualifications, even excuses.

Surely young black professionals have not been given keys to BMWs, Hondas and Jettas for doing nothing. Or is it so? It is conceivable that in this little elite group, one might find individuals who have earned their positions. But I doubt it. I know that black professionals are not what they could be, they are not making the contribution they are capable of. I know because they are relatively few and tend to belong to the same tiny, highly-sought-after group that I have been drawn into.

Granted, limiting factors like racism are beyond the control. But our professionals have allowed their development and growth to be stifled for self-gain and material wealth. Without wishing to be offensive, I should frankly say the black professionals have sold their souls and the aspirations of their people for thirty pieces of silver. I should emphasise that a majority of them are complacent because of schemes like "black advancement programmes" or "affirmative action". This has brought them money, cars, bank accounts, houses and other perks simply because they are black and have a history of disadvantage.

I should confess that I have explored the issue with business school graduates, lawyers, doctors, journalists, politicians, unionists, managers and public affairs men and women, to name a few. And they have told me in no uncertain terms that they are stressed by what they have become. Yes, they have allowed their potential to be frustrated, to wither in the scorching heat of the corporate world because they cannot afford to live without what they get for doing nothing.

I have listened to a young doctor tell how he wanted to improve the health of people and yet charges exorbitant fees because he wants to be "with it" in material terms. I have listened to a journalist, who remains obscure to this day, confess how her career opens doors for her to mix with the elite. I have listened to a public affairs manager boast how he has opened an account to entertain influential black politicians: "My boss is impressed when he learns that I took Thabo Mbeki for lunch at Sandton". I have listened to an MBA moan how he is hopping around as a director of this and that: "But I have neither power nor influence, I'm just a token". I have listened to young,

intelligent men and women tell how they take novels to word because their days are empty of meaning and direction.

In as far as I am concerned the current generation of black professionals' desire is to get a piece of cake,. None of them wants to be left out while the wealth of the country is divided among the oppressors and a few privileged blacks with the right qualifications. One need only the trust and confidence of black professionals, and that will tear a facade of self-importance off glorified messengers who are just too happy to do nothing in the service of their country. It is well-known that the unbanning of the ANC and the PAC and the release of Nelson Mandela have heralded a new era for educated blacks in the corporate world. It is well known that most white companies have embarked on an intensive drive to lure black brains.

However, I have come to realise that none of the black professionals are employed to do meaningful work. I am the first to stand up and say blame should not be put on whites or apartheid. I have seen that for black professionals the acceptance of apartheid money to entrench their positions in the black middle class is not a moral issue.

They are willing to do anything that serves their selfish, personal interest. I have prided myself on being counted among the new generation of black professionals. I found this to be a major breakthrough for the struggle that our people have waged over the past decades. Yes, being black, young and educated was the only route if you wanted to go places in the fast-changing face of a white corporate world. Alas, the essence of this has radically changed.

In the past few months the question that has become prime in my mind is: "What are my peers doing to help the corporate world make itself relevant to the aspirations of our people?". Since February 1990 what significant contribution have the people who took to the streets in 1976 made? I know there are some who worked hard and launched their "first black this and that". But they have not yet done what they can. Praise for their initiatives has been premature. It has become clear that black professionals who make waves are soon sidetracked by their mediocre celebrity status. What a pity! I found it vital as a young man to ask myself what the hell is going on with young black talent. Why should the gifted black intelligentsia allow itself to remain on the outskirts of decision-making in the most exciting period in our history? I have

agonised over this tragedy and only desire to sensitise my contemporaries to the adverse consequences of their decision to sell out. Focusing attention on the corporate strategy of white management to buy time for itself is a misdirection of energies. The black worker cannot afford to turn a blind eye to the realities in its own house - realities that threaten to sabotage its self-determination programme.

Black professionals who drive posh company cars and stay in the suburbs are a symptom of a disease that plagues this nation. Their complacency is only the tip of the iceberg, a facade to hide their inertia. Simply put, the problem is their unwillingness to rise to the challenge. And it dates back to three years ago, when Nelson Mandela walked out of prison free. Young black professionals still have a lot to do in their communities and should question the merit of channelling their energies to attending week-long seminars and conferences.

This is a strategy to deny them a significant role in a period in history that will determine trends in the subcontinent. The black professional elite should refuse to be sidetracked from active participation in a changing South Africa. But the sad thing is that they embrace being passive onlookers in the most challenging time of our history and their careers. Black professionals stand, arms folded, and watch helplessly as their right to be wrong is exchanged for a mere thirty pieces of silver. They continue to accept meaningless appointments and their career paths are mapped without their input.

We must appreciate the seriousness of this tragedy and reconsider the black self-brainbashing. My contemporaries must be willing to make the necessary sacrifice of paying their dues before they drive posh cars and move into R200 000 homes. They must stop doing things for self-gain and cheap glory. There is no doubt in my mind that the black intelligentsia can make a meaningful contribution to this country and where it goes. I believe that it is young black professionals who hold the key to heralding the new Afro-centric era in the country, on the continent, in the world.

The most important thing is not how long young black professionals stay in a large corporation but how they use their skills and intelligence. I believe that

those young, gifted and black people who love this country shall never cease to make our people realise how we are losing sight of our goals.

### COMPREHENSION QUESTIONS

- 1 What do you understand by the topic?
- 2 What does the writer mean by *token*?
- 3 Why in your opinion does the writer choose to direct his accusations at young black professionals?
- 4 Does the writer imply that it is wrong for young black professionals to enjoy the fruit of their own labour?
- 5 Why are these young professionals criticised for not earning their positions?
- 6 In more than one way young black professionals can be said to be victims of their society and of their own making. Discuss.