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THE RELATIVE EFFECTIVENESS OF CRITICAL READING AND SEMANTIC MAPPING INSTRUCTIONAL STRATEGIES ON SECONDARY SCHOOL STUDENTS' LEARNING OUTCOMES IN READING COMPREHENSION.

BY

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ABSTRACT

The study investigated the relative effectiveness of two instructional strategies (Critical -Reading and Semantic Mapping) in reading comprehension. It examined which of the two instructional strategies would be more effective in facilitating reading comprehension of students and looked at the interactive effects of gender and verbal ability on subjects' reading comprehension. Furthermore, it examined the effect of the two instructional strategies on attitude and motivation of the subjects.

The study adopted a pre-test, post-test control group quasi experimental design, using two experimental groups and a control group. The subjects were 360 senior secondary school I students randomly selected from Abeokuta metropolis in Ogun State. Seven hypotheses were tested at .05 level of significance. Instruments used to gather data are reading comprehension Achievement Test, Students' Attitude to the study of Reading Comprehension in English Questionnaire, students' motivation for the study of Reading comprehension in English Questionnaire, verbal ability test, lesson guides and an observational schedule.

eatment given consisted of the use of critical reading, semantic pping in the training of subjects to read and comprehend four ssages on themes ranging from 'Mineral oil in Nigeria' to wspapers and Measles 'Data collected were analysed, using a 2x2 factorial design. Descriptive statistics of means, standard iations and inferential statistics involving Analysis of Covariance ICOVA), Multiple classification Analysis were done using Scheffe tiple range comparison (at. 05 level of significance where nificant differences were indicated).

The research findings indicated that instructional strategies had a ificant effect on the variation in subjects' achievement in reading prehension. (F=348.8;.P >.05) The two experimental groups' critical ling and semantic mapping were found to be superior to the control p (conventional method). Gender did not contribute significantly to variation in subjects' achievement scores in reading comprehension. result also indicated that the two experimented instructional egies affected the attitude of subjects to reading comprehension 22.81; P<05). Additionally, instructional strategies

had effect in the variation in motivation of the subjects ($F=65.81$; $P<05$). However, verbal ability had no significant effect in the performance of subjects in various groups.

Based on these findings, it is recommended that Critical Reading and Semantic Mapping Instructional strategies should be employed in teaching reading comprehension at the secondary school level in Nigeria. When the classroom teacher employs these interactive strategies of teaching reading comprehension, the performance of students should increase, and the students are likely to develop positive attitudes and motivation to reading comprehension.

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Above all, I give glory to the Almighty God, from whom all blessings flow. I thank my Lord Jesus for granting me wisdom and knowledge to carry out the study.

I thank God for granting me excellent health and for sparing my life to glorify His name in this work. Unto the Lord be the glory for the great things He has done.

CERTIFICATION

I certify that Mr. Oladele Jiboku in the Department of Teacher Education, Faculty of Education University of Ibadan carried out this work under my supervision.

.....

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CHAPTER ONE

BACKGROUND AND STATEMENT OF THE PROBLEM

1.0 INTRODUCTION

Language is an important factor in the intellectual development of man. It is also a sine qua-non in the education of man. Language determines the survival of the learner within the learning environment. Because of this importance of language in the intellectual development of man, it always takes a vantage position in the curriculum.

In every learning situation, four major language skills are always considered; these are listening, speaking, reading and writing. The subsets of reading skill are important skills, since a learner will not survive in a formal education setting, if he is unable to read. This is why, experts in language education and communication devote much time to reading skills in the development of the learner.

There are many definitions of reading and each of the defi-

nitions approaches the phenomenon from different perspectives. There are some definitions that deal with learning to read i.e. reading at the early stage of a child's development. Others deal with reading to learn i.e. beginning reading or reading to comprehend what is read; the type that occurs in the reading of adolescents and adults. According to Unoh (1983), reading is a complex language processing behaviour that entails interpreting behaviour, or getting meaning from written or printed materials. It then follows that good reading will include an understanding, or comprehension, not only of literal sense, or meaning of written or printed materials, but also of the meaning implied by author's mood, tone.... intent and attitude toward his subjects, readers and even himself.

Another scholar, Anderson (1985), in his own definition emphasised the importance of meaning in the process of reading. He said,

> Reading involves more or less simultaneous analysis at many different levels. The levels include graphonemic, morphemic, semantic, pragmatic and interpretative process.

Thus reading, like learning, generally involves complex activities and in this, the thought process will be involved. Hence

thinking processes are involved in the various models of reading postulated by psycholinguists. This school of thought asserted that reading comprehension as a human behaviour involves the interaction of language, thought and cognition.

While the psycholinguists have only explained the process of reading comprehension, reading educators have been making efforts on how to foster in the individual child the ability to understand the printed language. For instance, Unoh (1983), said reading instructional strategy used by the reading teacher with the characteristics of the learner will affect the quantity of what is read and understood.

Teachers, educators and researchers in Europe and America have developed various strategies and instructional methods to help the reader comprehend the material before him. Specifically at the secondary school level, improvement in reading comprehension has been researched into. Some of these studies stress the importance of instructional strategies that will enable students to understand what they read.

Despite the efforts of the teachers and researchers on reading comprehension and learning, the general state of reading

instruction is still that of slow progress. In Nigeria, for instance, eachers are fond of testing the learners in reading comprehension without teaching reading comprehension skills in the classoom.

.1 THE STATE OF READING COMPREHENSION IN IIGERIAN SECONDARY SCHOOLS.

Reading is as old as colonial education. It came into existence hen the missionaries introduced both education and religion to ie natives. For example, the C.M.S established industrial train- g institution in Abeokuta in 1859 and some of the subjects ught in the school included:

1. Orthography
2. Reading in English
3. ArithmeticP
4. Arts and Craft e.t.c

Thus, the emphasis at the initial stage was on the 3RS, eading, Writing and Arithmetic. There was no clear-cut curricun for the development of the native. Besides the teaching of

reading in the school was inadequate -

During the decade of independence in 1960s, the importance of English in Nigeria was clearly indicated by the fact that it was still the lifeblood of the whole educational system at secondary and post-secondary levels. A certificate at the secondary school level can only be obtained, if the candidate earns a credit pass in English language. Reading comprehension and précis writing were part of the English syllabus. But the trend then was irrelevant to the development of the Nigerian society.

This trend continued to the end of 1960s when the first National Curriculum Conference was summoned. This later led to the 1977 National Policy on Education that was revised in 1981. In the document, the government realised the importance of language in the learning process of the child, hence the policy emphasised the study of languages (indigenous and English) from pre-primary to the secondary level.

According to the policy, the junior secondary school curriculum should be structured to make integrated English core-subjects. Also at the senior secondary school level, English language is a core-subject. The policy further stated that the core-

subjects are basic subjects that will enable a student to offer rts or Sciences at higher education level.

The state of the policy gave a sense of direction to the curculum planners, who later fashioned out the junior and senior econdary school curricula in English studies. In the English Language curriculum for Senior Secondary School comprehension akes a vantage position. According to the National Curriculum on English language (1983).

> Comprehension and summary writing skills are seen as vital areas for the development of student's proficiency in English language. At the senior secondary phase, the two inter-related comprehension skills introduced in J.S.S. are reinforced and developed to greater depth. AT this level, the content of these skills is related to real or possible activities of everyday life, such as listening and reading comprehension for the purpose of note-taking, summarising and interpretation or explanation of ideas read, or listened to.

The designers of the curriculum realised the fact that the learner must be able to read in order to survive in the educational world, even outside the school. The learner needs reading comprehension to keep pace with development that is going on in his milieu. At senior secondary school level students need to de-

p efficient reading abilities. For instance, in the new in
um in English Language for senior secondary school
students are expected to acquire the following skills:
o read and to:
Grasp word meaning in various contexts
Summarise main points;
Evaluate critically
nfer from meaning, suggestion and writer's purpose
dentify topic, theme or heading for the passage
Summarise paragraph;
Summarise an extended complex passage.

Reading Comprehension Instruction in Nigeria

The teaching of reading and reading comprehension is as
he teaching of English language in Nigeria. Now, there is
eral consensus as to the best instructional strategy for the
g of reading comprehension.

The popular reading programme, which predominates in
n secondary schools and in other African countries, is an
sational approach whereby reading is incorporated in the

anguage Art/English language curriculum. In this approach it uld be observed that apart from the emphasis of instruction on e development of students' skills, teachers hardly have the time meet all the reading comprehension needs of students.

The poor performance of students at various examinations, especially the West African School Certificate Examination disturbing. For instance, the Chief Examiners' reports in 1988, 89 and 1990 May/June and Nov/Dec. examinations emphaed the fact that the majority of the failures in English Language aminations are as a result of the candidates' inability to perform ectively in the comprehension and summary aspects.

Perhaps, students have not been taught how to read and nprehend effectively or the teachers have been employing incient methods in reading comprehension lesson. Studies in past by Unoh (1983), Ayodele (1986), Jiboku (1991) among ers asserted that, the instructional approach by the teacher determine the performance of students in reading and underding. It is certain that, if students are not taught important

skills in reading comprehension, they cannot perform effectively.

The reading comprehension problem of students will affect heir academic performances in and outside the school. Hence, cholars believed that, the interactive approach (which incorpote critical reading instructional strategies, semantic mapping inructional strategies and others) will reduce the poor performnce of students in reading comprehension.

2 STATEMENT OF THE PROBLEM

The study investigated the relative effectiveness of criticaading and semantic mapping instructional strategies on hievement, attitude and motivation of some secondary school dents in reading comprehension. It also examined the extent which students' sex and verbal abilities affect their achievent, attitude and motivation in reading comprehension.

PURPOSE OF STUDY

Language educators and applied psycholinguists have n pre occupied for sometimes now, on how to teach the ner the best way to read and comprehend what is read. This y will contribute to the existing body of knowledge on the use

of interactive strategies in the teaching of reading comprehension in English as a second language.

Swafford (1989) revealed that, some of the most popular reading instructional strategies have no empirical reading foundations and are only being used on the basis of conventional wisdom. This study will be among the lots that conduct empirical study into the teaching of reading comprehension through the use of two strategies based on the interactive model of reading.

The study is also particularly relevant to curriculum development and instructional material production in reading comprehension in English.

In particular, the study will provide useful information to all professionals concerned with Language teaching and development, especially the classroom teachers who often use only the conventional method when teaching reading comprehension in the classroom.

1.4 RESEARCH QUESTIONS

The study addressed the following questions:

(i) Is there any difference in reading comprehension

achievement between students exposed to the two instructional strategies and those in the control group?

(ii) Is there any difference in Attitude to reading comprehension among the subjects of the study, as a result of their exposure to the two instructional strategies?

(iii) Is there any difference in the motivation to reading comprehension among the subjects of the study, as a result of their exposure to the two instructional strategies?

(iv) Does gender interact with students' achievement, motivation and attitude toward reading comprehension?

(v) Do the verbal abilities of the subjects influence their achievement in reading comprehension?

1.5 RESEARCH HYPOTHESES

The following null hypotheses were tested in the study:

Ho1: There is no significant difference in the mean

post-test achievement scores of subjects exposed to the two instructional strategies and the control.

Ho2: There is no significant difference in the mean post-test achievement scores of male and female subjects exposed to the two instructional strategies and the control.

Ho3: There is no significant difference in the mean post-test achievement scores in students' attitude to reading comprehension when exposed to two instructional strategies and the control.

Ho4: There is no significant difference in the mean post-test achievement scores in students' motivation to reading comprehension when exposed to the two instructional strategies and the control.

Ho5 There is no significant difference in the mean post-test achievement scores of students with high and low verbal abilities exposed to the two instructional strategies and the control.

Ho6 There is no significant difference in the mean post-test

achievement scores in students' attitude to reading comprehension be they female or male, when exposed to the two instructional strategies and the control.

H07 There is no significant difference in the mean post-test achievement scores in male and female students motivation to reading comprehension when exposed to the two instructional strategies and the control.

1.6 SCOPE AND DELIMITATION OF THE STUDY

This study is specifically designed to examine the relative effectiveness of Critical-Reading and semantic Mapping Instructional Strategies on achievement, attitude and motivation of some secondary school students.

Although, there are many types of instructional methodsin reading comprehension, this study focused attention on Critical-Reading Instructional Strategy in reading comprehension developed by Stauffer (1989), and Semantic Mapping Instructional strategy in reading comprehension developed by Pittleman and

Heimiliah (1986). These were compared to the Conventional Method of teaching reading comprehension in which a teacher usually asks students to read a given passage and answer questions that follow it. Also, the study was limited to finding out the likely influence of sex and verbal ability among various intervening variables that may affect the study.

The study was also limited to selected senior secondary schools in Abeokuta Metropolis in Ogun State because of the proximity to the researcher. The researcher found Abeokuta suitable for the collection of data.

1.7 THEORETICAL FRAMEWORK

Language and thought are closely connected; Psycholinguists asserted that all the four Language Skills interact with human thought for meaningful communication. To this school of thought, reading is a process of interaction between language, thought and cognition.

A Psycholinguist, Harris (1967), said reading is a complex psycholinguistic activity which includes various important aspects such as recognising symbols quickly and accurately, identifying

clearly with dissemination, the meanings implied by the author, reacting to and using the ideas secured through reading in harmony with readers' purpose and integrating them into definite thought and action patterns.

The position of Psycholinguists influences the current view of reading, which described reading comprehension as an interactive process, in which both the reader and the text contribute information to arrive at the intended meaning of the author. Thus, the reader's comprehension of a text depends largely on the extent to which he actively brings to reading process at least two things:

(a) His knowledge of the language in which he is reading, and

(b) his background knowledge relevant to the content of the text.

According to Oyetunde and Umolu (1991), the sources of information available to the reader when processing the text are referred to as language cueing system, which includes grapho-phonic cues, syntactic cues and semantic cues. In the development of language cueing system, Goodman (1977), said grapho-

phonic cues are letter and sound combinations which form words and sounds they represent. Syntactic cues are the inter-relationship of words, sentences and paragraphs with a coherent text, while semantic cues are the meanings of the words. According to his scholar, all the things the Language User knows about the world and about the language come together to make up the semantic system of the language.

The interaction between the reader and the text led to interactive model in the teaching of reading comprehension. Oyetunde and Umolu (1991), advised the Nigerian reading teacher to approach the technique of teaching in the classroom with the knowledge of this model. The interactive model provides a well-defined framework, with which to carry out inquiries into how the reading teacher can systematically instruct the children. By using the instructional strategies (Critical reading and Semantic Mapping), an effective teacher can help the learners to understand materials properly during reading comprehension lessons. In other words, this research finds a basis in the postulations of interactive model that emanated from psycholinguistic school's view on reading comprehension

1.8 INSTRUCTIONAL PACKAGES

The two instructional packages that are used in this study include Critical Reading Instructional Strategy and Semantic Mapping Instructional Strategy.

A. CRITICAL READING INSTRUCTIONAL STRATEGY

The procedure of this strategy is in line with a strategy developed by Stauffer (1989), in a research article titled "Reading as a cognitive function"

The strategy has five instructional steps:

STEP I: Preparation: Activation: Activation and stimulation of student's' interest in reading. Teacher elicits students' experiences related to the topic of the passage e.g. What is poison?

Teacher tells students to guess what the passage is likely to discuss. Students are encouraged to defend this hypothesis .

STEP 2: Students read the story silently to find out, if their guesses are right.

STEP 3: Teacher asks questions that further arouse students' thinking e.g. can food damage parts of a human body?

STEP 4: Follow up questionsor evaluation e.g. under what condition does a disease thrive? What is the major contaminant implication in human disease? Students review the contents using their teacher's questions - proof of each answer is given by reading appropriate sentence(s) aloud.

STEP 5: Students engage in further reading or group discussion, while the teacher guides the stu-

B SEMANTIC MAPPING INSTRUCTIONAL STRATEGY

The Semantic Mapping Instructional Strategy used in this study is based on the development of the strategy by Pittlemen and Heimilah (1986), in their book titled "Semantic Mapping and Reading Instruction"

In this instructional strategy, the teacher leads the learners to analyse and understand the meaning of key words that will invariably help in the understanding of the general meaning of the passage. The strategy also involves construction of meaning's map to explain the relationship of the words. This is also made up of five steps.

STEP I: Teacher introduces the topic "Food poison and human environment". He identifies the key words In the topic "Food poison" "environment" He writes these on the chalkboard.

STEP 2: Teacher asks students to scan through the passage and identify words that they (students) think are difficult.

STEP 3: Students read out some of these words e.g 'disease' 'contaminated food' 'warm condition' humid 'condition' 'tropical countries' 'infection' etc.

STEP 4: Teacher lists and makes a map of the words on the chalk board. Teacher leads the students in the discussion of the meaning of some of the words.

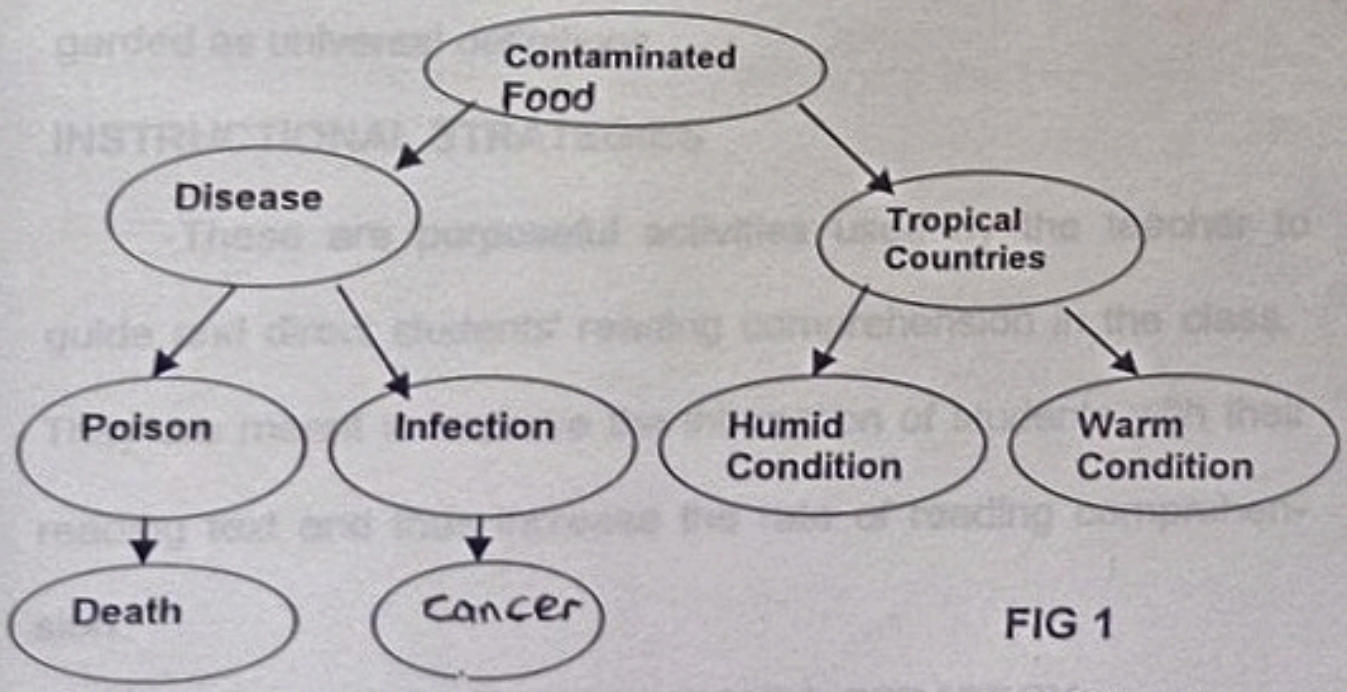


FIG 1

SEMANTIC MAP OF FOOD POISON AND HUMAN ENVIRONMENT

STEP 5: Teacher also goes through the meanings of words and shows their relationship e.g. contaminated food can cause disease and this can lead to poisoning and eventually death.

1.9 OPERATIONAL DEFINITION OF TERMS

All the terms defined here are mainly operational and of particular reference to this study; they are therefore not to be regarded as universal definitions.

NSTRUCTIONAL STRATEGIES

These are purposeful activities used by the teacher to guide and direct students' reading comprehension in the class. They are meant to improve the interaction of students with their reading text and thus increase the rate of reading comprehension.

CRITICAL-READING INSTRUCTIONAL STRATEGY

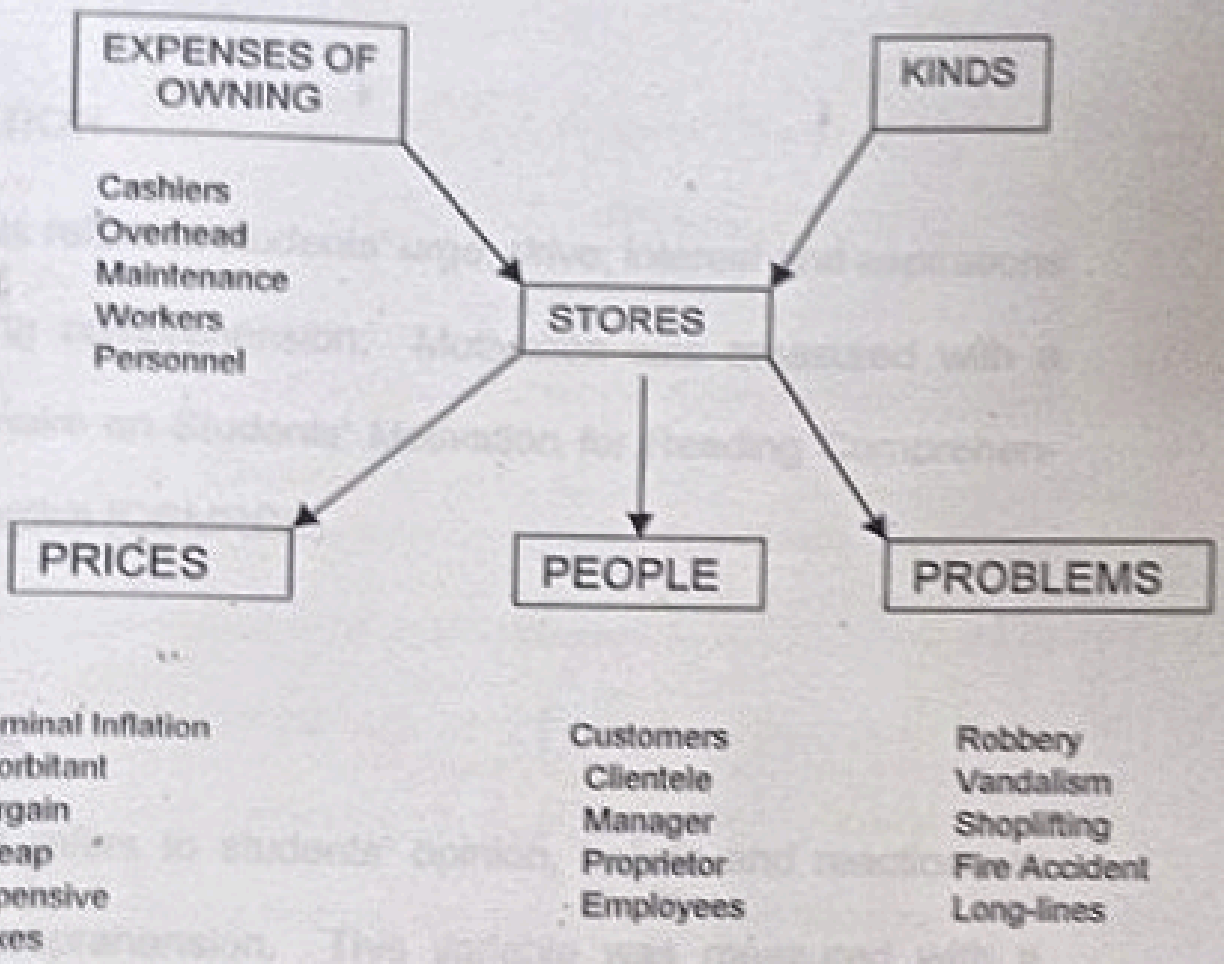
This is a reading comprehension instructional technique whereby the teacher systematically guides the students through divergent thinking activities e.g. questions, predicting, discussing, outlining,

summarising, inferring, hypothesising, evaluating to arrive at a conclusion in a given story or reading material.

SEMANTIC MAPPING INSTRUCTIONAL STRATEGY

In this study this refers to reading comprehension instructional technique used by the teachers to lead learners to identify analyse and understand the meaning of key words which will invariably help in the understanding of the general meaning of the passage. The teacher leads the students to identify difficult words and a map of these words will be drawn on the board. The map will show the relationship between the words e.g. the map below.

FIG 2: CLASSROOM MAP FOR STORES



CONVENTIONAL METHOD

The popular method of teaching reading comprehension whereby students are asked to read a passage and at the end they answer question(s) based on the passage.

COMPREHENSION

This is the process of meaningful interaction between the reader and the text, whereby the reader modifies his existing knowledge, as a result of new information obtained from the text.

MOTIVATION

This refers to students' urge, drive, interest and aspirations for reading comprehension. Motivation was measured with a Questionnaire on Students' Motivation for Reading Comprehension in English (QSMRCE)

ATTITUDE

This refers to students' opinion, beliefs and reactions to reading comprehension. This variable was measured with a Questionnaire on Student's Attitude to the Study of Reading Comprehension in English(QSASRCE)

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

Reading comprehension skill is an important language skill. It is vital in the learning environment because it exposes the learner to series of experiences which will facilitate learning and lead to behavioural change generally. This important position of reading skills within the curriculum has led to series of studies in the past on the nature and the functions of reading and reading comprehension. The present attempt is meant to contribute to the findings of scholars in the past and to investigate the empirical effectiveness of instructional strategies on the learning outcomes of learners. Hence, this chapter will review literature both theoretically and empirically on reading comprehension and other variables that are involved in the study.

2.2 THE NATURE OF READING COMPREHENSION

Reading is one of the four language skills and reading comprehension is a sub-skill under reading. According to Bond and Tinker (1967):

> Reading involves the recognition of printed or written symbols, which serve as stimuli for the recall of meaning built up through the reader's past experience.

Another scholar Leedy (1956) said reading is a matter of search for the thought that was in the mind of the author and which now lies in the meaning of the words that are before the reader.

In another study by DeBoer and Dallman (1967), they asserted that:

> Reading is an activity that involves the interpretation and the comprehension of ideas symbolised by written or printed language. Also effective reading involves all the higher mental processes of recall, reasoning, evaluating, imagining, organising, applying and problem solving.

The definitions above suggested by Leedy, Bond and Tinker, DeBoer and Dallman are consistent with the opinion of this investigator, who feels that the reading process is best de-

processing by human beings. According to Ogunniyi-Oluwumuyiwa (1987), information processing involves a human processor in receiving new facts, views, figures etc. and re-ordering or juxtaposing them with already existing facts, views, figures etc. in his repertoire of experience, thereby discovering new facts, views, figures etc. of which he was not previously aware. According to this scholar the process is complex and the human processor is constantly modifying his bank of facts, view, concepts, figures etc.

Scholars have also researched into reading comprehension, and the skills that are involved in comprehension. In fact some scholars have asserted that the basic purpose of reading is to comprehend. According to Doug (1989) reading comprehension is a process of obtaining information from print. That is, reading comprehension involves getting meaning out, or making sense of written or printed text. This process of meaning entails using both the text information and the information that the reader brings to the text. In order words, there is interaction between the reader and the text. Jegede (1991) asserted that reading com-

prehension is a language skill; therefore it is a habit that can be reinforced. Osisanya-Olumuyiwa (1998) analysed reading as a complex patterning of human behaviour by which a reader interacts with the text largely from his previous experience of events in the world. She listed all the subsets of skills in the complex patterning of behaviour to be trained systematically.

5.2 Critical Reading and Thinking

Critical reading is a sub-skill of reading comprehension. Likewise, it has been described in literature as one of the levels of reading. According to Ellinger (1977), critical reading is applying critical thinking to a material or a text.

Onyewotu (1991), says that critical thinking in reading simply means reasoning at a higher level of intellectual skill, which we bring into the reading of a text. This kind of reading requires the use of logic, experience and word knowledge to arrive at meaning which may not be immediately obvious in the text. According to Osisanya-Olumuyiwa (1987), the same critical thinking one brings into reading is also brought into listening and understanding and the impact depends largely on ones experience of

the events. Ellinger (1977), further stated that the Adjective "critical" when used in the term of critical reading means to become aware of, or sensitive to. The scholar then tried to relate critical thinking and critical reading, saying

1. The learner should be taught to think as he reads and not to read empty words.
2. The learner should be taught to question a statement in the text and to develop sensitivity for the rightness or wrongness of the author's thought by asking "Is this true?
3. The learner should be taught to appraise an author's conclusions for their authenticity.

The above statements show that critical reading is basically a reasoning process. Astill (1987), contended that critical thinking in reading would consist of the skills of logic, reason, critical analysis, critical questioning, inferring detecting bias and higher order process skills.

The idea of thinking and critical thinking is very important in critical reading. According to Jegede (1991), thinking can be regarded as operating skills used to arrange and to rearrange perception and experiences, so that we may have a clearer view

of things; in other words thinking is a basic tool, the learner uses to properly understand experiences; and thinking can be critical or creative. Harris and Cooper (1989), state that thinking processes of analysing, comparing, criticising and decision making are involved in a cognitive task like critical reading. These scholars also contended that one can also look at critical reading as a thinking - act in response to written communication.

De Bono (1983), contended that due to the very basic nature of thinking in the learning process and its relationship to us, its widespread use in day-to-day real life situations, it is imperative that thinking skills are taught either directly or indirectly.

Likewise Harris and Cooper (1989), contended that if a person is not thinking then he is not reading; thus it is important to help students to think analytically, critically and creatively. Grant (1992), said:

> A goal of good education should be to lead students to consider critically the information they receive on the world around them. Make them to recognise the difference between the map (or representation) and the terrain (or experience) for which it stands.

2.3.1 Critical Reading Skills

Critical reading is a sub-skill of comprehension. Reasoning is involved, and hence cognition. Cognition according to Deboer (1983), is the process of perceiving, analysing, reasoning, interpreting, integrating and problem solving; all these involve the eyes, the mind, the brain and central nervous system.

Dallman (1974), opined that reading comprehension either within the classroom or outside the classroom requires a number of mental tasks depending on the purpose of reading. These include:

(i) Selecting significant details

(ii) Selecting significant ideas

(iii) Answering questions

(iv) Summarising and organising ideas.

(v) Arriving at generalisation

(vi) Predicting outcome and be able to evaluate critically.

Binter and Diabal (1979), identified some language skills and sub-skills necessary for reading comprehension of a material. One of these is the thinking skill which includes the following:

Theorising

Generalising

Establishing cause and effect

Chronology and contrast co-ordination-subordination

Predicting

Concluding

Evaluating

2.4 Psycholinguistic School and Reading Comprehension

The psycholinguist established the influence of thought and thinking process in reading. This contention has led to the development of various psycholinguistic models of reading by scholars such as Goodman (1967), Gibson (1970), Carroll (1970), Unoh (1972) and Onochie (1986).

To Goodman (1967), reading is a psycholinguistic guessing game involving the interaction of thought and language. According to him,

> Efficient reading does not result from precise perception and identification of all elements but from the skill in selecting the fewest, most productive cues necessary to produce guesses which are

right the first time.

He then identified eleven steps that he believed are involved in a complete cycle of reading behaviour:

1. Scanning along a line of print from left to right and making a return weep
2. Making eye-fixations and using peripheral vision.
3. Beginning the process of selection through picking-up graphic cues based on previous knowledge of language.
4. Forming a perpetual image on the basis of these cues and his anticipated cues.
5. Searching one's memory for other relevant syntactic, semantic and phonological cues.
6. Partial decoding based, on tentative choice consistent with graphic cues, or with semantic analysis, the outcome of which is stored in short-time memory.
7. If a tentative choice is not possible the reader checks the perceptual input and tries to gather more graphic cues.
8. If a decodable choice is made, it is tested for semantic and grammatical acceptability.

9. If the tentative choice is not semantically or syntactically acceptable, the reader regresses to locate the missing information.

10. If the choice is acceptable, decoding continues, new meaning is assimilated with previous meanings and new expectations are generated.

11. The cycle then continues.

Another theorist, Ruddell (1978) said,

> Reading is a complex psycholinguistic behaviour which consists of decoding written language units, processing the resulting language through structural and semantic dimensions, and interpreting for deep structure data, relative to an individual's established objectives.

Unoh (1972), regarded reading

> as essentially a cognitive or learning activity. This activity appears to consist of perceiving, processing, interpreting, comprehending and synthesising information that is conveyed by written or printed language.

Goodman (1970),who stressed the psycholinguistic nature of reading claimed that comprehending reader processes information from three interlocking systems; the graphophonic, the

syntactic and the semantic and made informed guesses about meaning. This scholar contended that meaning depended on the perception of the reader.

He said, however skilfully the writer has expressed meaning in Language, the meaning is latent until the Language is decoded and it can only be decoded for meaning by a reader who not only is able to use the language but who has sufficient background to understand the message once it is decoded.

One idea runs through the postulations of the psycholinguistic school on reading. This is the fact that reading comprehension is message reconstruction. They also express the fact that thought process and other psychological factors are involved in reading comprehension. They had created enabling environment for studies on reading for instance, Goodman (1967) model can be regarded as a successful attempt at synthesising empirical research findings and sound hypotheses concerning both linguistic and psychological matured people; yet he does not have the last say on the science of reading, and in fact reading comprehension in a second language situation like Nigeria.

2.5 SEMANTIC MAPPING AND READING COMPREHENSION

Mapping has been given numerous labels depending on the author's use of the procedure. Hanf (1971), called it Cognitive Mapping, Webster (1978), Semantic Webs, Meyer (1979), Graphic Overview; Ambuster (1982), Idea Mapping, Singer and Beam (1984), Semantic Mapping, Pittleman and Hemilliah (1986), Semantic Mapping.

According to Pittleman and Hemilliah (1986), semantic mapping is designed to help students use their prior knowledge and expand that knowledge through vocabulary acquisition and discussion using the fields of cognition, language acquisition and information processing. These scholars were able to arrive at the following conclusions:

(1) That comprehension is an active process in which readers interpret what they read in accordance with what is already known about the topic. The reading process itself is

(2) The vocabulary development plays an important role in reading comprehension. A reader's vocabulary serves as a means of labelling the ideas of important conclusions. The scholars then maintained that:

(a) Teachers need to find ways to help students activate and retrieve prior knowledge related to topic about which they will be reading.

(b) teachers must also provide activities that give students an opportunity to mobilise existing information (so that readers are ready to relate to their meaning)

(c) vocabulary must be introduced in meaningful ways so that existing knowledge is activated, allowing the new information to be linked to the old.

Pearson and Johnson (1978), suggested how Semantic Mapping could be used as an instructional strategy and their suggestion has become acceptable world wide. This strategy drew heavily on activating prior knowledge of the topic. The procedure prepares students to understand, assimilate and evaluate the information read. It also capitalised on the use of word knowl-

edge. It involves the following stages

1. Prepare students to identify some key works.
2. List the word(s) on the chalkboard.
3. Encourage the students to think of many words as they can, that are related to the selected key word and then to list the words by categories on a sheet of paper.
4. Students then share the prepared lists orally and all words are
5. Written on the class map in categories.
6. The conferencing effort of the class produces a map.
7. The students can then give label to the map e.g.

FIG. 3: A CLASS MAP ON TRANSPORTATION

WORD	CLASS	EXAMPLES	ATTRIBUTES	RELATED CONCEPTS
Motor-cycles	Road Vehicles	Honda, Suzuki	carries one or two persons, fast, two wheels	uses fuel engines
Cars	Passenger vehicles	Peugeot, Datsun, Toyota, Ford	carries up to five people	Road. uses fuel, public utility
Buses	Passenger	Toyota Mercedes Bedford	fast, four wheels, carries many people	road, uses fuel, public utility
Aeroplanes	Flying vehicles	Boeing Airbus	Fast, comfortable, flies in air, carries many people, very fast	Uses fuel, airport, pilot.

8 Discussion of the map is also done. This is often considered the most important part of the lesson. Its purpose is to encourage students to become aware of new words and to gather new meanings from old words and to see the relationship among all the words.

Hanf (1971), is another leading expert on Semantic Mapping. She contributed tremendously on how the concept could be used as a study skill to guide the processing of textbooks. She recommended that semantic mapping could be used as an advance organiser. This will enhance better comprehension, as well as an effective displacement of traditional note taking and outlining procedure. Her model could be used as a study skill with individuals or groups.

The Scholar recognised that students used three basic steps to design a map of content information from a text.

(1) Identification of the main idea; the title or main idea may be written on a sheet of paper and a shape is drawn round it. Students then think of all they already know about the topic and decide what they expect to find in the chapter. Students then write three or four questions about the topic on the other side of the

map.

Secondary categories: The main parts of the text book or chapter form the secondary categories in a semantic map. Before reading the textbook and, having known the title, the students' hypothesise what the basic parts of the text will be; they then skim the chapter for the accuracy of their hypotheses. Labels for the secondary categories must be summarised and labelled. The secondary categories organised around the main idea complete the structure of the map and provide a picture of the intellectual territory to explore and conquer. The teacher then recommends that students place a question marker after each category label, so that they know what information to be looking for

(3) Supporting Details: In this final step of the reading process students read the chapter for details and complete the map by adding the details from memory. The map provides immediate feedback about whether students need to re-read the chapter to add more information to any of the categories. The completed map provides a graphic summary of information in the chapter.

There are many researchers that point to the efficiency of mapping as an instructional strategy to improve the comprehen-

sion of students from middle school through adult levels. In a study carried out by Skitter (1966), experimental subjects who were taught to use a graphic map for recall of information outperformed the control group.

In Dansereaus's study, (960) students recalled more information from their map when they used mapping and imagery.

Holley (1979) added other dimension; he looked at students' ability to acquire main ideas and details. In the study, experimental subjects acquired and organised main ideas better than the control group students, but did not acquire more details.

In an exploratory study, Miccinanti (1992), involved students from a class taught semantic mapping after reading an academic source. The subject significantly out performed the control group on the total scores of a 10 item multiple choice test and on recall of details both groups recalled main ideas equally well.

In a study by Ruddell (1984) at the University of California, Berkeley, 3 treatment groups of Volunteers were given 3 hours of instruction in semantic mapping. They learned to create individual maps of their reading which were then used as working outline for writing. Mappers who wrote essays scored higher than non-

mapping groups as well as showing significant performance when pre-test and post-test scores were compared.

2.6 ATTITUDE AND READING COMPREHENSION

Considerable researches have been conducted on the roles of attitude and motivation in second or foreign Language learning. These researches began with claims made by Lambert (1955) that an interest in learning another language often developed because of emotional involvement with the language community or because of a direct interest in the language itself.

Oskamp (1977) defined attitude as a mental state of readiness organised through experience, exerting a direct or dynamic influence upon the individual response to all objects and situations with which it is related. Ajazen and Fishbein (1975), conceived attitude as a learned ... predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object.

Dada (1976), defined attitude as a complex of feelings, desires, fears, convictions or other tendencies that have given a set of readiness to an act of a person as a result of varied

experiences.

These definitions highlight the fact that attitude is learned through experience and readiness to behave in a particular way. This attitude involves the formation, conservation and modification of ideas, opinions, beliefs and intention through experience.

Walker (1975), in his study identified various attitude traits of young readers. These include the:

(i) Timid child or reader

(ii) Withdrawal young reader

(iii) Apparently dull child

(iv) Severe under-reacting child

(v) Butterfly child e.t.c

The researcher confirms that all these variables are important in reading. Also, Moyle (1970), opined that many factors might be responsible for the attitude of a reader to the reading material. He analysed these as:

(i) Poor language environment

(ii) The living conditions and

(iii) The attitude of parents towards education

Kifer and Surtain (1981), contributing to the discussion on the role of attitude in reading asserted that family background contributes considerably to the attitude of the child to reading. They identified various variables;

(i) Status variable (e.g. socio-economic status). The socio-economic variable correlated with the child's achievement in reading at school.

(2) Process variable (e.g. achievement press, providing rich language environments), this indicates what parents do, to encourage and support academic achievement of their children.

Thus, according to Kifer and Surtain, good readers tend to come from home environments that are psycholingusitically comfortable. This fosters positive attitude toward reading and learning as well as provides stimulating cultural and language experiences.

2.7 MOTIVATIONAL THEORY AND READING COMPREHENSION

Scholars' opinions are divided on a single definition of motivation. McGreach and Irion (1954), defines motivation as the condition of the individual which initiates and sustains his behaviour, orientates him towards the practice of a given task and which defines the adequacy of his activities and the completion of the task.

Peters (1958), considered motive a key concept in the definition of motivation. He summed up the characteristics of motive as reasons for justification and explanation of actions and reasons of a direct sort.

Also, Cofer and Appley (1968), define motivation as the:

(i) Process of arousing, sustaining and regulating the pattern of activity

(ii) Process by which expression of behaviour is determined or its future expression is determined by consequences to which the behaviour leads.

The definitions above portray some essential components of motivation such as goal-directed behaviour, activity, which is partly determined by the desire to avoid pain or either internal or external to the organism, or both.

Motivation, like attitude, facilitates the learning of languages. Gardner and Lambert (1972), stressed the relevance of motivation to learning when they posed this vital question. "How is it that some people can learn a foreign language expertly while others, given the same opportunities, are utter failures?" The answers to this type of question which appear conventional and simplistic, include

(a) Variations in teaching method

(b) Having a linguistically stimulating environment

(c) Differences in verbal aptitude

Walker (1975), asserted that motivation in reading can be seen as the dynamic force that initiates, energises, sustains and directs the activities of the reader. Clark (1975), reported the effect of motivation on reading speed and comprehension and he

revealed that motivation or the 'set to learn' significantly influences recall in reading comprehension.

In the same vein, Moyle (1970), said children could read books that are rated higher than their grade levels when they are motivated to read the books or when they find them interesting.

In Nigeria, there have been series of studies by scholars on the role of motivation and attitude on language learning. These include Dada (1976), Araromi (1987) and Jiboku (1991). The present study will contribute to the existing knowledge in this area, and also prove empirically the effects of instructional strategies on motivation and attitude of students towards reading comprehension.

2.8 GENDER AND READING COMPREHENSION

Buffery and Gray (1972), asserted that biological difference accounted for sex differences in verbal and spatial abilities. According to them, the differences in the organisation of the brain of female and male accounted for the differences. The dif-

ference is termed cerebral asymmetry. Cerebral asymmetry refers to the fact that different sides of the brain are specialised in performing different functions. The left cortex is dominant for, or controls verbal functions. It controls the right hand and receives most of its input from the right ear and the right visual fields (the right half of what you see). The right cortex is usually dominant for non-verbal functions such as perception of rhythm and spatial relationships. The right cortex controls the left hand and receives most of its input from the left ear and left visual field. These scholars then hypothesised that laterization, the left hemisphere dominance for language, occurs earlier and more completely in female brains than male ones. This, they said, explained female superiority in verbal skills and male superiority in spatial skills.

In North America, there is a popular view that on the average, young girls perform better than boys on test of reading readiness and early reading achievement tests.

Maccoby and Jaclin (1974), maintained that girls are better than boys in reading tasks. They stated that possible causes for early difference in reading related behaviour fall into two broad

categories, (1) genetic, (2) environmental. Genetic differences have been suggested as a basis for deficit in boys, which might take the form of maturational lag, or differences in attention, activity or aggressiveness. Major environmental hypotheses include bias in reader's content, negative treatment of boys by female teachers and general cultural expectations related to sex roles.

However, studies on the role of gender in reading comprehension abilities of learners are not conclusive. For instance Samuels and Tunnure (1974), reported no significant sex differences in reading readiness of learners.

Fairweather (1976), said there does not seem to be general agreement on sex difference on reading ability. Whatever differences exist initially, sex differences in reading achievement are no longer apparent after about the age of 10.

This study, however, sets out to investigate if Gender will influence the reading comprehension ability of the learner in a second language situation like Nigeria.

2.9 THE ROLE OF VERBAL ABILITY IN READING COMPREHENSION

Verbal ability is an important factor in language learning. According to Hermann (1990), Obemeata (1976), the verbal ability of the learner will determine his performance in the language at both reading and writing levels.

Also, Vygosky (1962) and Yoloye (1965), emphasised the place of verbal intelligence in language learning. Kress (1960), asserted that the verbal ability of the learner will include (i) word power, (ii) sentence arrangement (iii) ability to arrange words, (iv) substitution of elements, (v) logical selection of appropriate word.

Another set of scholars asserted that the biological differences in the organisation of the brain of male and female accounted for the differences in verbal abilities. According to Buffery and Gray (1972), different sides of the brain perform different functions. The left cortex is dominant of controls of verbal functions. This part develops quickly in females while the right cortex is

usually dominant for non-verbal functions such as spatial relationships. These scholars then contended that these differences explained the female's superiority in verbal skills.

There have been few studies on the role of verbal ability in reading comprehension. These include Clark (1975), and Unoh (1983). According to Clark (1975), verbal ability combines with other variables to influence the reading comprehension of the learner; thus verbal ability alone is not enough to determine the reading comprehension ability of the learner.

2.10 APPRAISAL OF LITERATURE

In the review of Literature undertaken in the various sections above, the following issues can be outlined as highlights that provided focus for this investigation.

Reading comprehension is a psycholinguistic phenomenon, whereby language, thought and cognition interact.

Literature also reveals that psycholinguists are only preoccupied with descriptions. Much had not been done on research and pedagogical implications.

Semantic Mapping as an instructional strategy in teaching reading comprehension is very relevant in first language situation, but few empirical studies are available in a second language situation like Nigeria.

Motivation and attitude in learning of second language and reading comprehension in particular, are relatively new thus empirical reports on them remained inconclusive.

Gender is another important issue in reading comprehension. Scholars are not united on the role of gender or sex in reading comprehension.

Finally, the literature review has revealed that little had been done in the area of empirical research into effectiveness of interactive strategies (critical reading and semantic instructional strategies) in secondary school teaching in Nigeria.

CHAPTER THREE

METHODOLOGY AND PROCEDURE

INTRODUCTION:

This chapter describes the methodology and procedure
d in both the pilot study and the main study.

THE PILOT STUDY

The pilot study was carried out to find out whether:

(i) The research design and instruments were feasible in a classroom setting.

(ii) The instructional techniques proposed were feasible in a classroom setting;

(iii) The Achievement Test, Attitude and Motivation scales measure what they were supposed to measure with considerable high consistency;

(iv) The time allotted to various sections of the programme was adequate for the students to complete

necessary tasks;

(v) any problems of class management and test administration would emerge in the classroom setting, so as to provide corrective measures in the main study.

3.1.1 DESIGN OF THE PILOT STUDY

The study adopted pre-test post-test control group quasi experimental design. A quasi-experimental design is the one where true experimentation is not possible. This is because the researcher lacks full control over the scheduling of experimental stimuli.

The pre-test, post-test control group design will be appropriate for this study because of the variables that are involved.

3.1.2 SUBJECTS OF THE PILOT STUDY

One hundred and twenty (120) Senior Secondary School II Students from three mixed schools were randomly selected from Ilaro metropolis in Ogun State. An intact class was selected from the streams in each school. Each class was made up of forty stu-

dents. For experimental group I, we have Egbado College, aro. The students of Itolu High School, Ilaro were used for ex- erimental Group II. Anglican Grammar school was used for the ontrol group.

:1:3 INSTRUMENTS OF THE PILOT STUDY

The instruments used for the pilot study include:

1) Reading comprehension achievement tests I & II

2) Questionnaires: namely

(a) Questionnaire on Student Motivation in Reading comprehension in English (QSMRCE)

(b) Questionnaire on Students' Attitude to Study of Reading Comprehension in English (QSASRCE)

3. Lesson guide

4. Verbal Ability test (VAT)

3.1.4 PROCEDURE OF THE PILOT STUDY

During the first week the researcher took permission from the school authorities. The investigator visited the classes

and the teachers were informed. It was during the week that the researcher divided the classes to the experimental and control groups. The subjects were given the Reading Comprehension Test I, Questionnaire On Attitude, Questionnaire On Motivation And Verbal Ability Tests.

The next four weeks were used for the experiment. The first experimental group was treated with Critical Reading Instructional Strategy. Experimental Group II was treated with semantic Mapping Instructional Strategy and the Control Group had the normal teaching with conventional method. i.e. they were just given passages to read and answer questions that follow. The researcher was the only teacher during the experiment

At the end of four weeks, the instruments were administered. These include, Reading Comprehension Achievement Test II, Questionnaire on Motivation in Reading Comprehension in English (QSMRCE), Questionnaire on Students' Attitude To Study Of Reading Comprehension In English (QSASRCE) and Verbal Ability Test (VAT) They were administered to measure

the gains of the subjects and the validity of the tests.

3:1:5 SUMMARY OF FINDINGS OF THE PILOT STUDY

The pilot study was very useful to the process of validating the instruments, assessing the appropriateness of instructional strategies and collecting information on the duration it took students to complete various tasks. The study also served as a prototype for the main study pointing out weaknesses and strengths of the design and the instruments, on the basis of a trial run. The following findings and suggestions were recommended for the main study.

(i) The instructional procedure was found to be feasible. However, It was found that in order to remove experimental bias, i.e. a situation where the presence of experimenter (Researcher) might influence the behaviours of subjects, or subjectivity in evaluating the subjects' behaviour, it would be appropriate for the experimenter to train and use the teachers in the schools in which the study were carried out.

(ii) The Questionnaire on Students' Attitude to Study of

Reading

(iii) Comprehension in English (QSASRCE), Questionnaire on

Students' Motivation for Reading Comprehension in English (QSMRCE). Reading Comprehension Achievement Tests and Lesson Guides were found to be appropriate for the main study

(iii) Some of the items in the verbal ability tests were found to be either ambiguous or irrelevant. Such items were expunged from the test. The final test has (20) items that were found suitable for the main study.

(iv) Time allocation was found to be appropriate for the content of the lesson and the timing of various tests.

3:2 THE MAIN STUDY

3:2:1 THE DESIGN OF THE MAIN STUDY.

The design of the main study was the same, used in the pilot study. This was described in the previous sections. The design is robust because it neatly controls for all the seven threats to internal validity of the research. These include,

(i) History,

(ii) Maturation,

(iii) Testing,

(iv) Instrumentation

(v) Statistical regression

(vi) Mortality and

(vii) Selection

The belief of the scholars is that they would be manifested equally in experimental and the control groups.

FIGURE 4: DIAGRAMMATIC REPRESENTATION OF THE DESIGN

O_1 X_1 02 (Experimental group I)

O_3 X_2 04 (Experimental group ii)

O_5 X3 06 (Control group)

Where X_1 = treatment I (critical reading instructional strategy)

X_2 = treatment II (semantic mapping instructional strategy)

X_3 = control, (where students received normal class teaching)

O_1 O_3 O_5 = Pre tests for experimental and

control groups

O_2 O_4 O_6 = Post tests for experimental and control groups

The study also employed a 3 x 2 x 2 factorial design for the analysis of data collected. Likewise, the design was used to trace the possible interaction of the variables involved in the study. It is therefore, appropriate for this study because it made it possible for the researcher to test more than one hypothesis about main effect efficiently in one experiment. This saved time and energy. Secondly, the design helped the researcher to study the factors that interact thereby allowing for greater generalisation that may be possible.

In addition the design has external validity. According to Best (1981), the sampling error in the estimation of main and interaction effects was reduced thereby increasing the power of significant test.

VARIABLES IN THE STUDY.

The Independent variables in this study are the modes of instructional strategies that are involved and the control treatment.

Specifically these are: -

(i) Critical -reading instructional strategy

(ii) Semantic mapping instructional strategy

(iii) Control (Conventional method).

The Dependent Variable are

(i) Achievement in reading comprehension

(ii) Attitude and

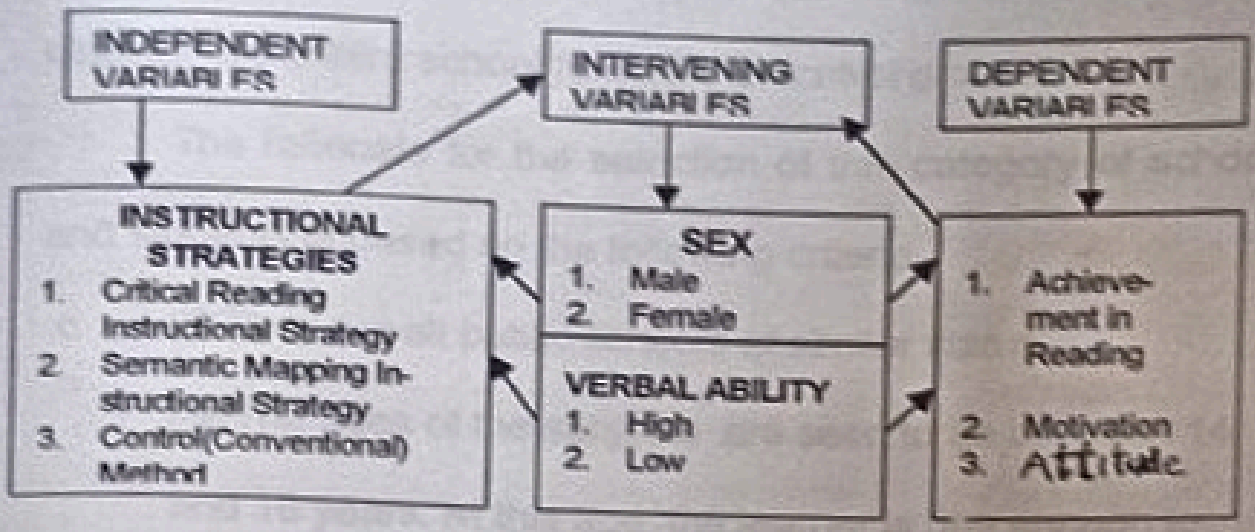
(iii) Motivation

The Intervening variables are at two levels

(i) Sex

(ii) Verbal/ability

FIGURE 5: DIAGRAMMATIC REPRESENTATION OF THE VARIABLES OF THE STUDY



3. 2. 2 SUBJECTS OF THE MAIN STUDY

Three hundred and sixty (360), Senior Secondary School students drawn from three mixed secondary schools in Abeokuta metropolis constituted the subjects for the study. A random sampling strategy was used in the selection of schools. Two schools were selected for the experimental groups and one for the control group.

In each of the schools, three intact classes were randomly selected from the streams. Each intact class was made up of forty (40) students, thus from each school we have 120 students.

The total number of subjects in the treatment groups (experimental groups I & II) was 240. And 120 subjects in three intact classes in the third school formed the control group.

The rationale for the selection of this category of schools and students is based on the following criteria:

(i) They are all public schools of similar status.

(iv) The ages of the subjects are seen to be between 14 and 16 years. At this age, the learner is ripe enough to gain significantly from reading comprehension i.e. he/she will be able to read to learn and will have enough background experience that will help him/her to decode the intended meaning by the writer;

(iii) The students have been through JSS and SS1 for some years, and must have learned some grammatical structures and usage that will guide their linguistic and semantic cueing during reading comprehension.

TABLE 6: DISTRIBUTION OF SUBJECTS FOR THE MAIN STUDY

GROUPS	SCHOOLS	NO.
Experimental Group I	Abeokuta Grammar School, Abeokuta	120
Experimental Group II	St. Peter's College Olomore, Abeokuta	120
Control Group III	Egba High School Asero, Abeokuta	120
TOTAL		360

TABLE 7: DISTRIBUTION OF SUBJECTS ACCORDING TO SEX IN EACH GROUP

GROUPS	S E X		TOTAL
	MALE	FEMALE	
Experimental Group I (Critical Reading Instruction)	44	76	120
Experimental Group II (Semantic Mapping Instruction)	19	101	120
Control Group III (Conventional Method)	79	41	120
TOTAL	142	218	360

TABLE 8: DISTRIBUTION OF SUBJECTS ACCORDING TO VERBAL ABILITY

GROUPS	LOW VERBAL ABILITY	HIGH VERBAL ABILITY	TOTAL
Experimental Group I (Critical Reading Instruction)	47	73	120
Experimental Group II (Semantic Map-ping Instruction)	45	75	120
Control Group III (conventional Method)	80	40	120
TOTAL	172	188	360

3:2:3 INSTRUMENTS OF THE MAIN STUDY.

3:4 The instruments of the pilot study which were also used for the main study include:

1. Reading Comprehension Achievement Test 1 & 11
2. Questionnaires, namely

   (a) Questionnaire on Students' Attitude to Study of Reading Comprehension in English (QSASRCE)

   (b) Questionnaire on Students' Motivation in Reading Comprehension in English (QSMRCE)
3. Verbal Ability Test (VAT)
4. Lesson Guides
5. Observational schedule
6. Instructional strategies

Reading Comprehension Achievement Tests

(a) Reading Comprehension Test One (RCTI)

This test is designed to test pupils' pre-treatment reading ability. The test is made up of a passage (300 words) - which is related to the background of the subjects. The subjects were asked ten questions after the passage. The objectives of the test are:

1. To determine the achievement in reading skills of the experimental and control group.
2. To determine the level of reading comprehension of each group.

The reading achievement pre-test is also important since students' ability to answer comprehension questions or recall information on reading assessment instrument has traditionally been used as a proxy for reading ability in general (B) Reading Comprehension Test Two (RCT2)

The reading comprehension test II was essentially the same as RCT I The main difference lies in the objectives of the tests, while RCT I was used as a pre-test of students' comprehension ability prior to instruction, the RCT II aimed at identifying how much change (if any) that has occurred in the students' reading ability due to treatment received. The test was made up of questions that were based on synthesis, Analysis and application. They were to measure the ability of subjects to theorise, hypothesise and critically examine.

The test is also meant to measure the extent of relationship between achievement and the intervening variable sex.

RELIABILITY AND VALIDITY OF READING COMPREHENSION ACHIEVEMENTS TEST 1 & 2

The two passages selected were from the class' English language textbook. The class text was *New Oxford Secondary English*. The major validation procedure of the achievement tests 1 & 2 was the application of Fry's formula for estimating readability on the two passages.

The formula is as follows

(i) Select 100 words from near the beginning, middle and the end of the passage.

(ii) Count the total number of sentences in each 100-word passage (estimating to the nearest tenth of a sentence) Average these three numbers (add together and divide by three)

(iii) Count the total number of syllables in each 100-word sample and average the total number of syllables for

(iv) Plot the outcome on Fry's Readability Graph, the graph provided the average number of sentences per hundred words.

The average of the sentences and syllables of the passage was found to be 4.5

According to Fry's Graph, 4.5 to 5.0 sentences per hundred word passages are suitable for secondary school grades. Because of the relatively short length of passages used in this study, only the first and last set of 100 words were considered and averaging was done by dividing by 2 instead of 3. The comprehension passages were found to fall within 4.1 and 4.5 margin, which is well within the secondary school level.

Questionnaire on Students Attitude to study of Reading Comprehension in English (QSASRCE)

In order to investigate the attitude of SS2 students towards Reading Comprehension, a 12-item attitudinal scale was constructed by adapting the attitude-scale used by Onwukeme (1981), and Ezeokoli (1987). The aims are:

1. To measure the degree of students' attitudes towards

Reading comprehension both at the beginning and at the end of the experimental study, with the aim of drawing a comparison.

2. To find out students' attitudes towards reading comprehension lessons.

The questionnaire is divided into three sections:

SECTION A

1. Asks for the name of the school of the subject
2. The sex-male or female
3. Age of the Subject

SECTION B

This is made up of Likert-type scales with five options ranging from *strongly agree* to *strongly disagree*. The five options carry sample weight of 5,4,3,2,1 respectively with high scores representing positive attitude.

The negative items are reversed as 1,2,3,4,5 respectively

(see Appendix A.)

Questionnaire on Students Attitude to Study of Reading Comprehension In English (QSMRCE)

The questionnaire is a modification of motivational intensity scale used by Gardner and Lambert (1959) and Ezeokoli (1987). The purposes of the scale were:

(1) To measure the degree of students' interest and urge to learn reading comprehension.

(2) To compare the mean motivational level between the experimental and the control groups at the end of the study.

The scale contained 12 Likert-type questions with five options ranging from *strongly agree* to *strongly disagree*. The five options carry simple weight of 5,4,3,2,1 respectively with high positive motivation, the negative items are reversed as 1,2,3,4,5 respectively (See Appendix B.)

RELIABILITY AND VALIDITY OF QUESTIONNAIRE

All the questionnaires were validated and their reliability ascertained before their use for the study as indicated below:

(A) Students' Attitude to study of English Comprehension Questionnaire (SASECQ)

Originally the items drawn to measure subjects' attitude toward reading comprehension, were subjected to language education experts' opinions. Items which 90% of judges considered as truly representative of students' attitude towards reading comprehension were included in the final questionnaire. The 25 original items were reduced to 12. This was trial-tested on 40 SS2 students in a pilot test to test for the reliability of the items. A few modifications were made.

(B) Student's Motivation to Study of English Reading Comprehension Questionnaire (SMSECQ)

The questionnaire was given to six expert judges comprising language educators and English teachers for their opinions. Items which enjoy 90% and above of favourable expert opinions were included in the final instrument. This was given to four secondary school teachers to be tested on their pupils to verify students' comprehension of the test, appropriateness of

the content and suitability for the level of the class.

Kuder Richardson formula 20 was used to ascertain its reliability. Its internal coefficient was found to be .72. This was found to be very reliable.

VERBAL ABILITY TEST

The verbal ability test is a 20 - item test adapted from Australian Council for Educational Research (ACER) Test. The purpose of the test is to:

(i) Measure ability of students

(II) Categorise subjects into high and low verbal ability groups.

SCORING OF VAT

The test attracted one point for a correct response and zero for a wrong response. Thus the maximum score was 20 marks. Subjects who score 10 marks and above are regarded as high verbal ability subjects while subjects with scores below 10 (i.e. 9-0) are regarded as low verbal ability subjects.

VALIDITY AND RELIABILITY OF VERBAL ABILITY TEST (VAT)

The test has been used several times by foreign scholars. Obemeata (1976), has also validated it in Nigerian setting. Several others such as Ojogan (1990), and Ajiboye (1996). have also used this test in the past to measure verbal ability of students. Despite this, we thought it is appropriate to determine the appropriateness of the test to this study. Thus the test was administered on 120 students of some comparative age and class in a school of similar characteristics to the one that was selected for the main study.

The reliability coefficient of the test was calculated using Kudder Richardson formula, the reliability coefficient of the test was calculated as 0.82. This was found to be highly satisfactory

LESSON GUIDES

(A) Critical-Reading Instructional Strategy Lesson Guide.

This was prepared to show how reading comprehension could be taught using critical reading instructional strategy. The

adaptation was in agreement with the position of Staufer (1989), on how reading comprehension should be taught using Critical Reading Thinking Instructional Strategy. Guides were prepared for six weeks (See Appendix E.)

(B) Semantic Mapping Instructional Lesson Guide

This was prepared to show how reading comprehension lesson could be taught using semantic mapping. The adaptation was in agreement with position of Pittleman and Hemillar (1986) on how reading comprehension should be taught using semantic mapping. Guides were prepared for six weeks (See Appendix E.)

OBSERVATIONAL SCHEDULE (FOCUS)

An observation Schedule Focus (For Observing Communication used in the second language) was used. It was used to observe that the experimental teachers used appropriate strategies in each of the experimental groups. The schedule was an adaptation of the instrument earlier used by Fanselow (1975), and Ezeokoli (1986).

INSTRUCTIONAL STRATEGIES

(A) Critical Reading Instructional Strategy:

The procedure of this strategy is in line with a strategy developed by Staufer (1989).

(B) The Semantic Mapping Instructional Strategy:

This strategy as used in this study is based on the development of the strategy by Pittleman and Heimliah (1986).

3:2:3 PROCEDURE

During the first week of the study, the principals of the selected schools were consulted for permission to use their schools for the study.

In the second week, the teachers selected for the experiments were trained on how to use the critical reading and semantic mapping instructional strategies. The training lasted for a week. After this, the pre-tests were administered. The pre-tests consisted of Questionnaire on Students' Attitude to the Study of Reading Comprehension in English (QSASRCE), Questionnaire

on Students' Motivation for the Study of Reading Comprehension in English (QSMRCE) and the Verbal Ability Test and Reading Comprehension Achievement Test I.

For six weeks, subjects in experimental group I were treated with critical reading instructional strategy and those in experimental group II were treated with semantic mapping instructional strategy. The third group (control) received the normal lesson on reading comprehension with the conventional method.

While the experiment was in progress, the researcher visited the schools intermittently with the observational checklist (focus). This was to ascertain that the experimental teachers did what the experiments required. At the end of the sixth week, the post-tests were administered.

These include Reading Comprehension Achievement Test II, Questionnaire on Students' Attitude to Study of Reading Comprehension in English. (QSASRCE), Questionnaire on Students' Motivation in Reading Comprehension English (QSMRCE), and Verbal Ability Test (VAT)

3:3 DATA ANALYSIS

The sets of data generated from the study were analysed using descriptive statistics of means, standard deviations t-test and other inferential statistics such as ANCOVA, MCA and SCHEFFE Post Hoc test.

CHAPTER FOUR

RESULTS

This chapter presents the results of the research. They are the product of analysis of raw data collected from the field. The data generated were analysed using descriptive statistics of (mean, standard deviation), t-test and other inferential statistics such as Analysis of Covariance (ANCOVA,) Multiple Classification Analysis (MCA) and Scheffe post hoc test. The results are as presented here below starting from the first hypothesis:

Ho1: *There is no significant difference in the mean post-test achievement scores of subjects exposed to different instructional strategies and the control.*

TABLE 9:
SUMMARY OF SCHEFFE MULTIPLE RANGE COMPARISON (at .05 level of significance) OF THE POST MEAN SCORES OF THE ACHIEVEMENT OF SUBJECTS BY INSTRUCTION.

SUB-SET	MEAN
Sub-set I Critical Reading Instruction Group Mean	7.9
Sub-set II Semantic Mapping Instruction Group	6.1
Sub-set III Control Group	3.8

A Scheffe post-hoc test was done on the mean scores of the group to determine the actual source of significant difference indicated in the ANCOVA. As shown in table 9, the mean score of Experimental Group I differed significantly from that of Group 3 (Control). Likewise the mean score of Experimental Group II differed significantly from that of the control. The difference between the mean scores of experimental groups II and I was however not

significant. On the basis of these findings therefore,

Hypothesis No. I which states that there will be no significant difference in post-test achievement score of subjects exposed to different instructional strategies and the control is not accepted.

TABLE 10:

SUMMARY OF ANALYSIS OF COVARIANCE (ANCOVA) OF THE POST-TEST ACHIEVEMENT SCORES OF SUBJECTS IN READING COMPREHENSION ACCORDING TO INSTRUCTION, SEX AND VERBAL ABILITY.

Sources of Variation	Sum of Squares	df	Mean Squares	F	P
COVARIATES	3.087	1	3.087	2.28	.132
MAIN EFFECTS	1045.038	4	261.25	193.368	.000**
INSTRUCTION	942.623	2	471.31	348.836	.000**
SEX	2.231	1	2.231	1.718	.19NS
VERBAL ABILITY	.037	1	.037	.037	.86NS
2-WAY INTERACTIONS	2.968	5	.594	.439	.82
INSTRUCTION/SEX	1.604	2	.802	.593	.55
INSTRUCTION/VERBAL ABILITY	.418	2	.209	.155	.85
SEX/VERBAL ABILITY	.542	1	.542	.40	.52
2-WAY INTERACTIONS	4.605	2	2.30	1.70	.18
INSTRUCTION X SEX ABILITY	4.608	2	2.30	1.70	.18
EXPLAINED	1055.70	12	87.97	65.114	.000
RESIDUAL	468.830	347	1.351		
TOTAL	1524.531	359	4.24		

***=SIGNIFICANT NS = NOT SIGNIFICANT

The summary of ANCOVA in table 10 shows that instruction was found to have contributed significantly to variation in subjects' achievement scores in reading comprehension (F=348.836 P< .05)

TABLE 11

MULTIPLE CLASSIFICATION ANALYSIS OF POST-TEST ACHIEVEMENT SCORES OF SUBJECTS ACCORDING TO INSTRUCTION, SEX, AND VERBAL ABILITY

Variable and Category of Instruction	N	Unadjusted Deviation	ETA	Adjusted for Independent Covariates Deviation	Adjusted for Independent Covariates Deviation	BETA
INSTRUCTION						
Critical-Reading	120	2.00	.83		2.0	.84
Semantic Mapping	120	.15			.20	
Control	120	−2.16			−2.20	
SEX						
1. Male	142	-.46	.18		.11	.04
2 Female	218	.30			-.07	
VERBAL ABILITY						
1. Low	172	-.43	.20		-.01	.01
2 High	188	.40			.01	
Multiple R2 = .688 Multiple R = .829						

The multiple classification Table above describes the per-

formance of the subjects under the treatment conditions. Experimental group I (treated with Critical Reading Instruction) was found to have highest mean scores. While experimental Group II follows:

Ho2: *There is no significant difference in the mean post-test achievement scores of male and female subjects exposed to each of the instructional strategies*

TABLE 12

MEAN, STANDARD DEVIATIONS AND T-TEST COMPARISONS OF ACHIEVEMENT SCORES OF MALE AND FEMALE SUBJECTS EXPOSED TO EACH OF THE INSTRUCTIONAL STRATEGIES.

MODE OF INSTRUCTION	VAT	N	$\bar{X}$	SD	t	P
Critical Reading	Male	44	8.00	1.07		
	Female	76	7.9	1.29	.23	.82NS
Semantic Mapping	Male	19	6.5	.90		.07NS
	Female	101	6.03	1.0	1.82	
Control	Male	79	3.8	1.2		.5NS
	Female	41	3.7	1.1	.67	

NS = Not Significant

Table 12 shows the t-test comparison of post achievement scores of male and female subjects in the experimental groups

and the control group. The table shows that there is no significant difference in the means of post achievement scores of male and female in each group. On the basis of this finding, the null hypothesis that there will be no significant difference in the post-test achievement scores of male and female subjects exposed to different instructional strategies is hereby accepted.

Ho3: There is no significant difference in the mean post-test attitude to reading comprehension between subjects exposed to different instructional strategies and the control.

TABLE 13

SUMMARY OF SCHEFFE MULTIPLE RANGE COMPARISON (at. 05 level of significance) OF THE POST MEAN SCORES OF THE ATTITUDE BY INSTRUCTION.

Sub set I Group Critical - reading instruction Mean 43.9 sub set 2 Group Semantic Mapping instruction Mean 41.2 Sub set 3 Group Control Mean 38.2

Homogenous Subset/Groups

To determine the actual source of significant difference indicated in the ANCOVA, a Scheffe post-hoc test was done on the mean scores of the group. Table 13 shows that mean scores of Experimental Group II (Semantic Mapping) do not differ significantly from each another. But Experimental I differs significantly from the control group; therefore the hypothesis which states that there is no significant difference in attitude to reading comprehension of subjects exposed to each of the instructional

strategies and the control is not accepted.

TABLE 14

SUMMARY OF ANALYSIS OF COVARIANCE ON POST-TEST ATTITUDE SCORES OF SUBJECTS ACCORDING TO INSTRUCTION, SEX AND VERBAL ABILITY

Source of Variation	Sum of Squares	df	Mean Squares	F	P
COVARIATES	93.224	1	93.224	10.860	.000
MAIN EFFECTS	551.642	4	137.910	16.074	.000
INSTRUCTION	391.519	2	195.759	22.817	.000**
SEX	1.055	1	1.055	.120	.720
VERBAL ABILITY	21.565	1	21.565	2.510	.11NS
2-WAY INTERACTIONS	198.928	5	39.786	4.630	.000
INSTRUCTION/SEX	182.460	2	91.230	10.630	.000**
INSTRUCTION/ABILITY	15.361	2	7.681	.895	.400
SEX/VERBAL ABILITY	8.640	1	8.640	1.000	.310
3-WAY INTERACTIONS	12.092	2	6.046	.705	.490
INSTRUCTION X SEX X ABILITY	12.092	2	6.046	.706	.490
Explained	855.885	12	71.324	.831	.000
Residual	2977.09	347	8.580		
Total	2832.975	359	10.677		

**=SIGNIFICANT NS = NOT SIGNIFICANT

The summary of ANCOVA in table 14, shows that instruction using both strategies contributed significantly to the variation in subjects' attitude to reading comprehension ($F=22.817$; $P<.05$). However, sex and verbal ability have no significant influence

on the attitude of subjects. The result also shows significant interaction of instruction and gender.

TABLE 15

MULTIPLE CLASSIFICATION ANALYSIS (MCA) OF the POST-TEST ATTITUDE OF SUBJECTS ACCORDING TO INSTRUCTION, SEX, AND VERBAL ABILITY

Variable and Category of Instruction	N	Unadjusted Deviation	ETA	Adjusted for independent Covariates Deviation	BETA
INSTRUCTION					
Critical-Reading	120	-1.10	.40	-.85	.32
Semantic Mapping	120	-.73		-.85	
Control	120	1.83		1.69	
SEX					
3. Male	142	.51	.13	-.07	.02
4 Female	218	-.33		.07	
VERBAL ABILITY					
3. Low	172	.62	.18	.27	.08
4. High	188	-.57		-.24	

Multiple R2 = .168
Multiple R = .410

The table above shows that instruction affected the attitude of the subjects to Reading Comprehension.

Ho4: *There is no significant difference in the mean post-test motivation to reading comprehension of subjects exposed to different instructional strategies and the control.*

ABLE 16

UMMARY OF SCHEFFE MULTIPLE RANGE COMPARISON t. 05. level of significance) OF THE POST MOTIVATION EAN SCORES OF THE SUBJECTS BY INSTRUCTION

Sub set I Group Critical - reading instruction Mean 46.1
Sub set 2 Group Semantic Mapping instruction Mean 47.2
Sub set 3 Group Control Mean 40.1

Table 16 shows that the difference in means of the Critical ding and Semantic Mapping Instructional Strategies is not ificant. However, each of these groups scored signifily higher means than the control group. Thus, the hypothehat states that there is no significant difference in the

mean post -test scores in motivation to reading comprehension of the subjects exposed to each of the instructional strategies and the control is rejected.

TABLE 17

SUMMARY OF ANALYSIS OF COVARIANCE (ANCOVA) OF THE POST-TEST MOTIVATION SCORES OF SUBJECTS ACCORDING TO INSTRUCTION, SEX AND VERBAL ABILITY

Source of Variation	Sum of Squares	df	Mean Squares	F	P
COVARIATES	583.405	1	583.405	37.22	.000
Main Effects	2357.060	4	589.265	37.54	.000
INSTRUCTION	2063.176	2	1031.58	65.814	.000**
SEX	77.74	1	77.74	4.6	.020
VERBAL ABILITY	2.67	1	2.967	.189	.66NS
2-WAY INTERACTIONS	280.24	5	56.04	3.57	.004
INSTRUCTION/SEX	239.596	2	119.79	7.64	.001
INSTRUCTION/ABILITY	49.47	2	24.73	1.57	.20
SEX/VERBAL ABILITY	10.50	1	10.50	.67	.41
3-WAY INTERACTIONS	20.412	2	10.206	.65	.52
INSTRUCTION X SEX X ABILITY	20.412	2	10.206	.65	.52
Explained	3241.121		270.0	17.232	
Residual	5439.001	12	15.674		
Total	8680.122	347	24.179		
		359			

** Significant: NS = Not Significant

The summary of ANCOVA in Table 17 shows that instruc-

ion using both strategies was found to have contributed signifi-

cantly to variation in subjects' motivation in reading comprehension (F=65.814: P<.05.)

TABLE 18

MULTIPLE CLASSIFICATION ANALYSIS (MCA) OF POST-TEST MOTIVATION SCORES OF SUBJECTS ACCORDING TO INSTRUCTION, SEX, AND VERBAL ABILITY.

Grand Mean = 47.9

Variable and Category of Instruction	N	Unadjusted Deviation	ETA	Adjusted for independent Covariates Deviation	BETA
INSTRUCTION					
Critical-Reading	120	-2.25		-2.09	
Semantic Mapping	120	-1.70	.57	-1.99	.59
Control	120	3.66			
SEX					
5. Male	142	.72	.12	-.64	
5 Female	218	-.47		.42	.10
VERBAL ABILITY					
Low	172	.88		.10	
High	188	-.81	.17	-.09	.02

Multiple R2 = .339

Multiple R = .582

Table 18, describes the motivation of subjects under

treatment conditions. Experimental Group I has the highest mean, while the Control Group has the lowest mean.

Ho5: *There is no significant difference in mean post-test achievement scores of subjects with high and how verbal ability exposed to different instructional strategies and the control.*

TABLE 19

MEAN, STANDARD DEVIATIONS AND T-TEST COMPARISONS OF ACHIEVEMENT SCORES OF SUBJECTS WITH HIGH AND LOW VERBAL ABILITIES

Mode of Instruction	VAT	N	$\bar{X}$	SD	t	P
Critical Reading	Low	47	7.9	1.2		.91NS
	High	73	7.9	1.2	-.07	
Semantic Mapping	Low	45	6.1	1.3	-.92	
	High	75	6.1	.88		.36NS
Control	Low	80	3.8	1.2	.38	
	High	40	3.7	1.1		.70NS

NS = Not Significant

Table 19 shows the t-test comparison of achievement of high and low verbal ability students. This finding shows that there is no significant difference in the means of high and low verbal

ability subjects in each of the groups. Thus the null hypothesis, which states that, there is no significant difference in the mean post-test achievement scores of subjects with high and low verbal ability exposed to each of the groups and the control is hereby accepted.

Ho6: *There is no significant difference in the mean post-test scores in attitude to reading of male and female subjects exposed to different instructional strategies and the control*

TABLE 20

MEANS, STANDARD DEVIATION AND T-TEST COMPARISON OF ATTITUDE SCORES OF MALE AND FEMALE SUBJECTS EXPOSED TO EACH OF THE INSTRUCTIONAL STRATEGIES AND THE CONTROL.

Mode of Instruction	VAT	N	$\bar{X}$	SD	t	P
Critical Reading	Male	44	42.0	3.4		
	Female	76	40.2	2.8	3.1	.000**
Semantic Mapping	Male	19	36.9	1.8		
	Female	101	41.5	3.2	-2.5	.004
Control	Male	79	43.4	2.9		
	female	41	44.5	1.8	-2.21	.02

**Significant

Table 20 shows the t-test comparison of attitude scores of male and female subjects in the first experiment (Critical reading), the mean score of male ($\bar{X}$=42) is higher than that of female ($\bar{X}$-40.2). With this finding, the hypothesis which states that there is no significant difference in the mean of critical reading, or the mean of semantic mapping and the control is hereby rejected.

Ho7: *There is no significant difference in the mean post-test scores in motivation to reading comprehension of male and female subjects exposed to different instructional strategies and the control.* (See Table 21 below)

TABLE 21

MEANS, STANDARD DEVIATION AND T-TEST COMPARISON OF MOTIVATION SCORES OF MALE AND FEMALE SUBJECTS EXPOSED TO EACH OF THE INSTRUCTIONAL STRATEGIES AND THE CONTROL.

Mode of Instruction	VAT	N	$\bar{X}$	SD	t	P
Critical Reading	Male	44	47.1	3.7		
	Female	76	46.4	3.4	1.0	.31NS
Semantic Mapping	Male	19	46.6	2.1		
	Female	101	47.3	3.5	-.76	.45NS
Control	Male	79	51.7	4.8		
	female	41	50.0	4.0	-3.5	.61NS

NS = Not Significant

Table 21 shows the t-test comparisons of motivation scores of male and female subjects in the groups. The finding shows there is no significant difference in the motivation of male and female subjects in Experimental Group I. Likewise, there is no significant difference in the motivation of male and female subjects in the Experimental Group II (Semantic Mapping). Thus, the hypothesis which states that there is no significant difference in mean post-test scores in motivation to reading com-

prehension of male and female subjects exposed to each of the instructional strategies and the control is hereby upheld.

SUMMARY OF FINDINGS

The major findings of this study could be summarised as follow:

1. Instructional strategy has significant main effect on the variation in subjects' achievement scores ($F=348.83$; $P<.05$ level)
2. The result shows that critical -Reading Instructional Strategy ($\bar{X}=7.9$) is more effective than the Semantic Mapping instructional strategy ($\bar{X}=6.$) and these two strategies are superior to the control ($\bar{X}=3.8$) strategy.
3. No significant interaction on achievement among the variables was observed in ANCOVA (Table 10)
4. The t-test shows that, there is no significant difference in the achievement of male and female

subjects exposed to each of the instructional strategies.

5. ANCOVA also indicates a significant main effect of instruction on the variations in the attitude scores ($F=22.81$; $P< .05$, Table 14). Subsequent results further indicate that the Critical-Reading Instructional Strategy Group obtained the highest attitude mean score.
6. The findings on motivation show that instruction has significant main effect in the variations in motivation scores of the subjects in the groups ($F= 65.81$; $P<.05$, Table 17)
7. The verbal abilities of subjects have no significant effect on their performance in reading comprehension. The result further shows that there is no significant difference in the achievement scores of subjects with high and low verbal abilities.
8. The t-test shows that there are significant differ

ences in the post-test attitude of male and male subjects in each of the experimental groups.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 OVERVIEW

The findings of this study are interesting. It is pertinent to look at the main questions addressed in the study before we embark on a detailed discussion of the findings. The questions include:

a) Is there any difference in the achievement scores of subjects exposed to critical-reading, semantic mapping instructional strategies and the control (conventional method)? (b) Is there any difference in the achievement scores of male and female subjects exposed to different instructional strategies? (c) Is there any difference in the attitude to reading comprehension of the subjects exposed to each of the instructional strategies? (d) Is there any difference in motivation to reading comprehension of subjects exposed to different instructional

strategies? (e) Do verbal abilities influence the achievement of subjects exposed to different instructional strategies? (f) Is there any difference in the attitude of male and female subjects exposed to various instructional strategies? (g) Is there any difference in the motivation of male and female subjects exposed to various instructional strategies?

5.2 DISCUSSION OF RESULT

5.2.1 EFFECTS OF INTERACTIVE INSTRUCTIONAL STRATEGIES ON ACHIEVEMENT IN READING COMPREHENSION

The interactive instructional strategies developed for this study (critical -reading and semantic mapping instructional strategies) are based on the assumption of the psycholinguists that reading comprehension is basically a thinking or reasoning process. The human thought interacts with his language, hence the teaching of reading comprehension must be meant to teach thinking skills and vocabulary skills of the learner. These important skills are the foci of the two strategies in this study. According to the result, the instructional strategies were found to have contributed significantly to the gains in the achievement of stu-

dents exposed to them Table I (F=348.83; P>. 005). The findings supported the assumptions of the psycholinguists like Thorndike (1972), Debono(1983), and Stauf (1989). The results also supported the assumptions of language educators such as Unoh (1972), Oyetunde and Umolu (1991), Stemberg (1987), and Pittleman and Heimliah(1986). These scholars contended that reading comprehension as a complex human behaviour must be systematically taught to the learner. Oyetunde and Umolu (1991), said, specifically that the reader must be taught how to relate his thought process and experience to the language of the text in order to arrive at the meaning.

The findings also testify to the superiority of critical - reading strategy. Scholars in the past have also emphasised the importance of critical thinking skills in reading comprehension and maintained that thinking skills and thinking clearly will facilitate comprehension by the reader. Doug (1989), said, a reader is not reading, if he is not thinking. In other words reading and thinking go together. Also, Binter and Diabal (1979), identified the necessary sub-skills that are important in critical reading; also

Dallman (1976), asserted that the learner should be able to perform some important thinking tasks in order to arrive at the intended meaning of the writer. The fact that critical thinking is superior shows that the teaching of thinking skills as part of critical reading in a reading comprehension lesson will help the learner to understand the material better

5.2.2 EFFECTS OF INSTRUCTIONAL STRATEGIES ON ATTITUDE OF STUDENTS TO READING COMPREHENSION.

Attitude of the learner of a language to the language itself is important, and it will determine the performance of the learner in such a language. In reading comprehension the attitude of the reader is also important. Buttleman and Franco (1976), asserted, that the attitude of the learner to the subject and the content of the material before him will influence his comprehension. Also Unoh (1983), said that, the instructional strategy of the teacher will influence the attitude of the learner to reading comprehension. The findings of this study show that the two instructional strategies lead to positive attitude on the part of the subjects ($F=22.817, P<$

.05); thus these findings give further empirical support to previous findings of researchers on the role of attitude in Language learning Gardner and Lambert (1972), Oskamp (1977) Ezeokoli (1986) and Araromi (1987).

5.2.3 EFFECTS OF INSTRUCTIONAL STRATEGIES ON MOTIVATION OF STUDENTS TO READING COMPREHENSION

Motivation of the learner will determine the rate of assimilation in a language classroom. Klare (1975), asserted that motivation of the reader will influence his speed and comprehension in reading. Likewise Moyle (1970), said a child will be a better reader and even read outside the class (i.e. other texts), if he finds reading interesting. Cook (1978), said there are two main types of motivation of a reader in a second-language situation

(i) integrative motivation in which the reader wants to communicate actively with the writer or speaker of the language and

(ii) instrumental motivation in which the learner wants to use the language for some utilitarian purposes.

These two are important in the case of a learner, who is reading in English language to get the meaning of the writer. The findings of this study show that the instructional strategies employed by the experimental teachers increase the motivation of students in reading comprehension, ($F=65.81$ $P< .05$; Table 8). This proves that the interactive instructional strategies (critical reading and semantic mapping) increase the motivation of the reader during reading comprehension. The findings support earlier studies by Gardner, and Lambert (1972) which asserted that the teaching method(s), the teacher employs in a reading comprehension lesson will influence the motivation of the learner toward reading comprehension. Anything that is done within the four walls of the classroom, which does not take cognisance of the motivation of the learner, will be a disservice to him.

2:4 GENDER AND READING COMPREHENSION

The result of this study shows that sex has no significant effect on the performance in reading comprehension. This finding supports Dyskra and Tinney (1969) and Meggy (1990). It is pos-

sible, that in a second language situation like Nigeria, there might be no significant difference in reading abilities of both boys and girls. Some researchers in North America such as Buffery and Gray (1972), Maccoby and JacKlin (1974) asserted that, girls are better than boys in language learning, because girls' brains develop faster in language acquisition. Other scholars, did not find any significant difference in the abilities of both boys and girls in language learning. We want to stress that, the debate on the role of sex in language learning is not conclusive. Future researchers can still probe the subject further, in order to find the truth.

5.2.5 VERBAL ABILITY AND READING COMPREHENSION

Studies in the past have examined the role of verbal ability or intelligence in language learning. These include Kress(1960), Vygotsky (1962) Yoloye (1965) Obemeata (1976). In reading comprehension few studies such as Unoh (1983), show that verbal ability has little contribution to reading comprehension of the learners. Others such as Clark(1975) asserted that verbal ability combines with other variables to influence the reading comprehension of the learner. The result of this study also shows that

verbal ability has no significant influence on the performance of students in reading comprehension. Earlier studies by Ojogan (1990), and Ajiboye (1996), supported this finding, they found out that verbal ability as a single factor will not influence the performance of students. However future studies can be conducted to trace the effect of verbal ability on other language skills.

5.3 EDUCATIONAL IMPLICATIONS OF FINDINGS AND RECOMMENDATIONS

The findings of this study have profound implications for teaching reading comprehension in Nigerian secondary schools. In the past, English language teachers were fond of testing reading comprehension skills of students without teaching the students the necessary skills that would aid their reading comprehension. Others used crude methods and one of these Onochie (1986), described as "Read the passage and answer the questions that follow" syndrome. The two instructional strategies in this study, i.e. critical reading and semantic mapping, are designed to help the learner during reading of a material, thus they

are instructional techniques that will aid the thinking and facilitate the comprehension of the learner during the reading process.

The classroom teachers and school administrators can see that the instructional strategy employed by the teacher will influence the psychological motivation and attitude of the learner in the reading classroom. Hence, the teacher should use the interactive strategies that will aid their students' performance. In the same vein, school administrators and supervisors should encourage the teachers to employ these instructional strategies.

The findings of the study also have implications for curriculum implementation, especially in reading comprehension in English. The steps in the strategies can be made part of the procedure in the teaching of reading comprehension and summary writing at the senior secondary school level. When the students are taught the necessary skills, they will be able to read and work out the meaning of the material before them.

Textbook writers and publishers will also find the result of the study useful. They can use the findings to prepare the teachers' manuals that normally accompany the English texts. That is,

the reading comprehension instructional strategies suggested in the study can be incorporated into the manual. This will aid the teacher in the preparation of his lesson.

The study also has implications for the management of language classroom. The learners come to class with different background, attitude and motivation. The teaching technique employed by the teacher must be the one that will help to make the learners to develop positive attitude and to be motivated in a reading comprehension task. It is obvious, if the teaching techniques or strategies do not motivate the students, they will not learn and hence their attitude towards reading comprehension will be negative.

The findings also contribute to empirical inquiry into the teaching of reading comprehension in the classroom. Some earlier studies on the teaching of reading comprehension have no empirical backing. The results here show that the variables in reading comprehension skill can be identified and taught scientifically and thus this will increase the learning outcome of the students.

5.4 CONCLUSION

In conclusion, this study lends empirical support to the assumption that reading comprehension, as an interactive process, can be taught best by the use of interactive and integrative techniques, i.e. critical reading and semantic mapping instructional strategies.

The instructional strategies also influenced the attitude and motivation of students in reading comprehension. Sex and verbal ability have no significant effect on the achievement of student in reading comprehension.

The findings have implications. The findings will aid curriculum development works, specifically in curriculum implementation and classroom process.

5.5 SUGGESTIONS FOR FURTHER STUDIES

The findings of a study like this cannot be conclusive. Other studies in this area can look at the effects of other variables like environmental and psychological factors.

Also studies can be carried out on the reading strategies of

students and how self-learning procedures can be used to enhance efficient reading comprehension.

As the samples for this study are from Abeokuta in Ogun State, further studies can be carried out to cover wider areas like the whole of southern part of the country or the whole of the country.

Further studies in applied linguistics, specifically in the teaching of reading comprehension in a second language situation like Nigeria can include more dependent and intervening variables and the research instruments used in this study can be improved upon.

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APPENDICES

APPENDIX A

STUDENTS' QUESTIONNAIRE

Questionnaire on Students' Attitude to Study of Reading Comprehension in English (QSASRCE).

SECTION A

1. NAME OF SCHOOL .....

2. SEX: Male / / Female / / Mark 'X' in the appropriate Box

3. AGE: .....

SECTION B

INSTRUCTION:

Kindly show your agreement or disagreement with the following statement by ticking only one of the five columns provided against each statement.

ABLE ON PAGE 131

	SA	A	UND	D	SD
Reading comprehension will help me to understand English Lang. better.					
Reading Comprehension will improve my communication skill.					
Reading Comprehension exposes the mind of the writer to me.					
I would not like to be a reading comprehension teacher like my teacher.					
People do not respect those who can read but have no money.					
I will not need reading comprehension skill outside the school.					
Reading comprehension in English is required for the course I want to pursue at a higher level of Education.					

	SA	A	UD	D	SD
8. I hardly read at home after the school hours.					
9. Nobody at home is ready to help me with reading assignments					
10. I like to read stories and novels in order to re-tell the stories to other people.					
111. The way our English teacher teaches at school inspires me to read on my own at my leisure hours					
12. Reading of a passage for a long time is boring.					

APPENDIX B

Questionnaire on Students' Motivation for Reading Comprehension in English (QSMRCE)

SECTION A

1. NAME OF SCHOOL .....

2. SEX: Male / / Female / / Mark 'X' in the ropriate Box

. AGE: .....

SECTION B

INSTRUCTION:

Kindly show your agreement or disagreement with the following statement by ticking only one of the five columns provided against each statement.

	SA	A	UD	D	SD
1. I find it difficult to read and answer questions on a passage.					
2. I do not always understand the reading passage when I read it.					
3. English reading comprehension is required for the course I want to purse at higher level.					
4. Reading comprehension in English will one day help me to secure a good job.					
5. People do not respect those who read but have no money.					
6. I have always read at home after school.					
7. We rarely discuss a reading comprehension passage in the class.					
8. I have not benefited from my teacher's teaching of English comp.					
9. The way my teacher taught us to approach comp. Passage					

	makes reading comprehension easy and interesting.					
10.	English teachers always urge us to read a passage and find more facts about it before we read together in the class.					
11.	I will not need reading comp. passage outside the school.					
12.	My teacher does not teach us in class how to approach comp. passage.					

APPENDIX C

VERBAL ABILITY TEST

NAME: .....

AGE:.....

SEX:.....

CLASS:.....

NOTE: This is a test to measure how well you can think. It contains questions of different kinds and some examples have been given to show you how to answer the question.

EXAMPLE A: Four of the following are alike in some way. Write the number of the odd one in the bracket.

1. Plantain 2. Orange 3. Pineapple 4. Basket 5. Pawpaw

EXAMPLE B:

Which of the words completes each of the following statements:

Write their number in the brackets.

As Cold as .....

1. Ice 2. Water 3. Dog's nose 4. Rain 5. Air

(3)

EXAMPLE C:

Hand is to FINGER as FOOT is to .....

1. Leg 2. Arm 3. Toe 4. Man 5. Ankle

(Toe)

EXAMPLE D

Which two of the following statements mean most nearly the same? Write their numbers in the brackets.

1. Too many cooks spoil the broth.
2. Make hay while the sun shines.
3. A stitch in time saves nine.
4. It's a long lane that has no turning.
5. Strike while the iron is hot.

(2 & 5).

Now answer the following questions. You have 15 minutes.

Four of the following are alike in some way. Write the number of the **odd one** in the brackets.

1. (i) Cock (ii) Fish (iii) Hawk (iv) Parrot (v) Partridge. ( )
2. (i) Stomach (ii) Yam (iii) Tongue (iv) Mouth (v) Teeth ( )
3. (i) Table (ii) Chair (iii)(Bed (iv) Animal (v) Cupboard ( )
4. (i) Pepper (ii) Beans (iii) Drum (iv) Sweet Potato (v) Yam ( )
5. (i) Hen (ii) Turkey (iii) vulture (iv) Aeroplane (v) Hawk ( )

Which of the words complete each of the following statements. Write their number in the brackets.

6. As white as .....( )

   (i) cloth (ii) cotton wool (iii) Yam flour (iv) show (v) day

7. As thin as.....( ).

   (i) fried plantain (ii) rake (iii) woman (iv) broom (v) iron

8. As black as.....( )

   (i) Dye (ii) leaf (iii) charcoal (iv) person (v) monkey

7. As good as

8. (i) woman (ii) gold (iii) dear (iv) day (v) queen

9. As sharp as .....( )

(i) Stone (ii) razor (iii) mouth (iv) mirror (v) pen

11. INCH IS TO SPACE as SECOND IS TO.....( ).

(i) age (ii) hour (iii) time (iv) clock (v) third

12. HEAT IS TO ASHES, AS CARPENTRY is to.....( )

(i) saw dust (ii) carpenter (ii) chisel (iv furniture (v) wool

13. TELEPHONE is to VOICE as LETTER is to.....( )

(i) post office (ii) stamp (iii) writing (iv) correspondence (v) envelope

14. GATE is to FENCE as PORT is to.....( ).

(i) Land (ii) coast (iii) town (iv) sea (v) destination.

15. DRAMATIST is to a PLAY as COMPOSER is to.....( ).

(i)Symphony (ii) orchestra (ii) concept

(iv) Performance (v) piano

Which two of the following statements mean nearly the same thing? Write their numbers in the bracket.

16.

(i) Forewarned is forearmed

(ii) The loss which is unknown is not loss at all

(iii) No man is happy that does not think so

(iv) Uneasy lies the head that wears the crown

(v) Where ignorance is bliss, 'tis folly to be wise.....( )

17. (i) Time is a herb that cures all diseases.

(ii) Anticipation is better than realisation.

(iii) Today is worth two tomorrow

(iv) To speed today is to be set back tomorrow

(v) There is no time like the present

( ).

18. (i) A careless master makes a negligent servant

(ii) To resist him that is set in authority is evil

(iii) Little is done when many command.

(iv) when the cat is away the mice do play.

(v) Where there are seven shepherds there is no flock.

( ).

19. (i) It's petty expenses that empty the purse.

(ii) Little gains bring riches.

(iii) Even the weak are strong when united.

(iv) Constant dripping wears away the stone.

(v) A chair is as strong as its weakest link.

( ).

20. (i) Repentance is poor consolation.

(ii) More haste less speed.

(iii) Quick decisions often breed regret.

(iv) He'll have a bucket of tears for a cup of joy.

(v) Many in haste repent in leisure.

( ).

APPENDIX D

PASSAGE 1

READING COMPREHENSION TEST 1 (RCT: 1)

FOOD POISON AND HUMAN ENVIRONMENT

There is a general agreement that the environment we live in plays a major role in disease - causing processes. Apart from poor environmental sanitation, it is also important t be weary of unseen contaminants in what we take in as food. recent times, one of the contaminants which are being implicate

human disease particularly in less developed countries is Aflatoxin.

This poison occurs widely in warm and humid conditions that are found in many tropical countries. Its effects are mostly on the liver where they cause damage and may lead to cancer.

Aflatoxin is produced from the mould of fungus known as Aspergfillus flavus. This mould is often found in stored grains after harvesting. It thrives in warm and humid climates like ours with temperatures of about 27°C and humidity around 80 percent-enhanced growth. The early history of the disease was first indicated in 1960 in Britain where thousand of turkey fed on heavily infected peanut feeds died. The peanuts were imported from a tropical country in South America. The toxin causing death was eventually discovered to be Aflatoxin from the mould contaminating the nuts.

Apart from peanuts or groundnuts other sources include various grain, which are consumed by man among them wheat, corn, millet, rice and sorghum.

Non-granary sources are cassava, palm - kernel, milk, an

meat. Cassava with its high water content encourages growth of the mould. Milk is only a source if the mother has undigested food contaminated by Aflatoxin.

QUESTIONS

1. What are the two things that play major roles in dieases-causing process?
2. Name the major contaminant implicated in human disease especially in tropical countries?
3. What produces the contaminants?
4. Where is it found mainly?
5. Under what condition does it thrive?
6. Where was the first discovery and how?
7. Name other grains apart from groundnut on which the death-causing toxin may be found.
8. Name other non-granary sources of the toxin.
9. Is it possible for milk to be source of the toxin?
10. When was the first disease noticed?

ACHIEVEMENT TEST POST TEST

READING COMPREHENSION TEST 2 (RCT 2)

Read the following passage carefully and answer the questions on it.

Benin tradition tells of a Son of Oduduwa who was invited to come from Ife to rule the Edo. He did not stay long but while in Benin he had a son by an Edo girl and that boy became the first Oba of Benin. It seems that about AD. 1200 the Edo people joined with the Yorubas to form a State with Benin as its Centre. This State covered the Guinea Coast from Lagos to the land of the Delta. This Benin Kingdom included many areas in Yoruba land, all the lands of the Edo people and Ibo areas West of the Niger. It lasted as a strong kingdom until about the year 1700.

Soon after the year 1470, ships from Portugal visited the Guinea Coast and quickly made friendly contact with the Benin Kingdom. It was the one State on the West Coast of Africa which the Portuguese considered to be really important. The Oba of Benin sent an ambassador to the Court of the King of Portugal

nd allowed the Portuguese to build a Church in Benin.

At first pepper, Ivory and gold were sold to the Portuguese n exchange for European cloth, metal goods and spirits. Then he Portuguese began to need men to work on farms and in silver nines in South Africa. The chiefs of Benin, and other states used o sell criminals and prisoners of war. The Portuguese were eady to buy them. So began the evils of the Atlantic slave trade. The Portuguese gave the Edos guns to raid the inland peoples for slaves. They showed the people on the Coast how to grow maize and cassava to feed the slaves. These crops with others such as pineapples, paw-paw and tomatoes improved the food of the people and so increased the population. By 1700 the number of slaves taken across the Atlantic had risen to some 25, 000 every year. (J. D. Clarke, A Visual History of Nigeria)

(i) Who was the first Oba of Benin?

(ii) When did the first Portuguese ship visit the kingdom of Benin?

(iii) Who were the first sets of people sold into slavery?

(iv) What was the additional export of Nigeria?

(v) What was the additional import?

(vi) Who started the slave trade in Benin?

(vii) When did the Portuguese give the Edos gun?

(viii) Mention the names of crops the Portuguese introduced to the Edos

(ix) When was the Edo State formed?

(x) Mention two things that the Oba of Benin did that encourage the contact with Portuguese.

PASSAGE

MINERAL OIL IN NIGERIA

One of the most important minerals in the world is mineral oil. From this oil is obtained not only petrol, kerosene and lubricating oil but many other products. Mineral oil is found very deep under the surface of the ground. It is therefore difficult to discover exactly where it is. It is known to occur underneath soil of a study nature.

The work of finding oil under the surface of the ground costs a very great deal of money and enormous amounts are spent on it.

In Nigeria, people worked for several years trying to find

mineral oil under the sandy soils of southern parts of the Country. At last they succeeded and mineral oil has been found in several places in the area of the Niger Delta. The first wells to produce oil were at Obibiri and Afam in Rivers and Cross Rivers, which began to produce oil at the end of 1957. Oil is pumped through long pipes from these places and from another well at Bonny to Port Harcourt. These pipelines have now been extended to Bonny, which has been developed as a part for shipping oil.

A refinery from producing petrol, kerosene and lubricating oil from the mineral oil of Nigeria has been built at Port Harcourt. Oil has been discovered at other places: Warri, Degema and Uyo, east of the Delta and at Ughelli, Isoko and Patani in Bendel State. The National Oil Corporation was formed in 1971 and has forty-four oil fields. Petroleum is now by far the most valuable of Nigeria's export.

PASSAGE

ROAD TRANSPORTATION: THE CAR

Five years ago, my father agreed that I should learn how to

drive a car. It was his twentieth birthday gift to me. He got a Learner's Permit for me.

For three months, a licensed driver sat on the front seat beside me while I practised driving with my father's Peugeot 504 Saloon. In the first month, I drove on untarred secondary roads. During the second month, I was allowed to ply the busier tarred roads. However, as I became more confident and proficient, I drove on highways, otherwise called trunk "A" roads. I looked forward to the day I would take my driving test, get a licence and be qualified to drive on my own.

On the day of the test, I checked my hand brake, brake light, carburettor, plugs and engine oil level at the services station. The tyres were all right; the tyre threads were still fresh, but I made sure that the air pressure of the tyres was just right. I also ensured that my trafficators were in good working order. In short, the car was road worthy. I went to fuel the car at the petrol station. The petrol attendant put the petrol dispenser into my fuel tank and filled up the tank. I paid and left for the test-ground. The vehicle inspection Officer (V.I.O) asked me to reverse the car

six feet apart. I did. He also asked me to make a U-turn, accelerate and brake. The V.I.O then asked me a few questions concerning the Highway Code. I was successful in this too. He gave me a Pass Certificate and asked me to go to the Motor Licensing Office the next day to collect my driving license.

On my way home, I noticed that I had a flat tyre. I immediately cleared to the shoulder of the road, I wedged the car properly and jacked it up. Then I got a spare tyre with wheel spanner and replaced it with the spare tyre. I then drove to a Vulcanizer who patched the tube.

I was so excited that I failed to notice the steam coming out from the grill of the car. My father who was standing outside when I got home immediately noticed it and opened the bonnet of the car. There was more steam. He told me that the car was over-heating because there was no water in the radiator. My father said that, had the car been driven on a while longer in that state, it would have had an engine knock.

The next day, I had to take the Family fourteen-seater bus

to go and get my driving licence. That leak in radiator had not been soldered yet. I was stopped by a traffic policeman who asked me for my particulars. I offered the Vehicle Licence and Insurance Certificate. He asked me of my driving licence after looking at the vehicle chassis number and engine number. I gave him the Pass Certificate given to me by the V.I.O. and explained that I was on my way to get my licence. He frowned at the paper and told me that I was not qualified to drive that capacity of vehicle since my licence would be a 'B' class licence. I was ignorant of this distinction. He explained that heavy-duty lorry drivers had 'A' class licence. I was ignorant of this distinction.

He however, gave me the benefit of doubt and let me go.

PASSAGE

THE NEWSPAPER

Amadi was just a reporter with the local newspaper five years ago. He is now the Editor-in chief. The climb to the top was not easy. The Editor-in-chief is the technical head on the newspaper. The Newspaper Company for which Amadi works

has a daily and a weekly. Amadi worked for the weekly for one year as a Reporter. He was then transferred to the daily and promoted to sub-editor. While he was sub-editor, he also contributed feature articles to the newspaper on Wednesdays. His column was called the 'Parrot'. It was such a popular column that people first opened the centre spread to read Amadi's Column before they read any more of the news in the paper. His by-line became easily recognisable. Even when he travelled abroad for a two month course he still sent his articles as a special correspondent.

Back home, Amadi was transferred to the sports desk as sports editor. He organised and edited the sport page of the newspaper. He also contributed to the editorial column of the newspaper. Amadi believes that headlines were very important. He ensured that the headlines on the cover of the newspaper (evening edition), of which he was made editor one month later, were very attractive. Amadi had an eye for event that could have new value.

Owing to Amadi's excellent services, the circulation

of evening edition went up. In spite of the shortage of news print, the news paper board approved an increase in the news coverage of the paper. Sections on "Book Review" and " News around the World" were introduced.

Press censorship had always been the problem of journalist. When Amadi was made the secretary of Nigeria Union of Journalist, (NUJ), he fought for press freedom. As Editor-in chief of 'The Drummer' he increased the number of cartoon strips from one to two, in the belief that some people buy newspaper for their cartoons. He employed another cartoonist and since then, 'The Drummer' has become the fastest –selling newspaper in the Country.

PASSAGE

MONARCHICAL RULER

A monarch 's life is often full of problems. The saying "Uneasy lies the head that wears the crown" is obviously true. Only those who wear crown experience the full impact and true mean

ing. The ruler of Sagamu like his fellow monarchs had his fair share of problems before the incident of Agege surfaced to Crown it all. Hardly three days after his accession to the stool, instead of throne, as it is called here, a reported case of locust that seemed bent on wiping out new crops stopped what would have been the start of festivities to mark the beginning of his reign. As though this was not enough, a case of drowning soon followed as one of the five people in a canoe rowing across a stream accidentally fell over and was lost from sight. At its heel came an outbreak of chicken-pox, a disease so feared then that the mere mention of it sent people shivering.

Next was the visit of a leopard to the town at night. When this was noticed hunters were hired to kill this animal which merely came to destroy livestock and keep people in a state of fear.

The political parties and rallies came into being. Various parties sought out all natural rulers like him for help in rallying the people. It was a phase no one thought would ever end.

(Adapted from: "The Man from Sagamu" by Adora Lily Ulasi)

PASSAGE

MEASLES

Measles is an infectious disease and children can easily get the disease by a casual visit to a house where a child suffering from measles lives. A good number of well-conducted and properly written out studies show that more than one third of all children with measles are under the age of one year. It is true that by the age of three years, most children have experienced the disease.

The very severe and fatal form of measles mainly occurs in poor families. Indeed, it is a disease of over-crowding. In these families, it is usual for the feeding standard of the children to reduce badly after the first birthday. In this situation, measles is less severe in children below the age of nine months

The child with measles is a miserable child. he has sore eyes, sore mouth, harsh cough and running nose. The typical measles rashes first appear behind the ears after three or more

days of very high fever. The soreness of the eyes caused by severe measles may lead to blindness especially if the child lacks Vitamin A. Every child with measles should therefore be taken to a doctor.

Adapted from "Measles in Children" by Dr. V.O Edienwune in Sunday Statesman July (1985).

APPENDIX E

LESSON GUIDES /PLANS

LESSON 1

SEMANTIC STRATEGY

CLASS: SS 2

TOPIC: COMPREHENSION (Mineral Oil in Nigeria)

DURATION: 45 Minutes

OBJECTIVES: At the end of the Lesson, pupils should be able to:

(i) Explain word meaning by using Context clues.

(ii) Find out main idea(s) in a paragraph.

PROCEDURE

Phrase Time	Teacher's Activity	Pupil's Activities	Inst Mat
Introduction	Teacher tells pupils that one of the ways to Understanding the words used by writer. The approach they are going to learn is how to analyse the technical words generally as used by the author in order to under-	Pupils mention 'Petrol	

	stand and bring out the meaning of the passage. Tells the pupils to identify some of the key words in the passage before them.	'Kerosene' Lubricating oil underneath soil etc.	
2	Teacher asked them for the meaning of these words. Mention these words - Teacher records this in form of map on the chalkboard	Pupils suggest various meanings - mention these word	
3	He asked the pupils to read the passage silently and find out what it is about.	Pupils read the passage silently.	
4.	Teacher increases the map on the board with pupils' suggestions after reading the content.	Pupils with the guide of the teacher match their earlier suggested meaning with the additional meaning from the passage.	
5.	Teacher gives pupils take home assignment on the passage.		

LESSON 1

CRITICAL READING STRATEGY

CLASS: SS 2

TOPIC: COMPREHENSION (Mineral Oil in Nigeria)

OBJECTIVES: At the end of the lesson, students should be able to

(i) Apply critical thinking reading when treating a passage

(ii) Find out the main idea and supporting ideas in the passage.

PROCEDURE

Phrase Time	Teacher's Activity	Pupils Activity	Inst Mat.
Introduction	Tells Pupils about the aspect of English Language the lesson is about.Comprehension through critical thinking reading. He tells the pupils that The topic of the passage for consideration is 'Mineral Oil in Nigeria. He writes. this on the board		
2	He gives pupils questions to set them thinking e.g. - What is mineral oil? How can we get this ? How can we get this? What is the process?e.t.c	Pupils hypothetise on these questions	

Phrase Time	Teacher's Activity	Pupil's Activity	Inst. Mats
3	Teacher asks the pupils where can the mineral oil be found in Nigeria. And who are those responsible for its production?		
4.	He asks them to read the passage to find out if their guesses were right.	Students give various suggestions.	
5	Teacher further leads the pupils to generate more discussion on What they have read. He asks them further Question to arouse pupils thinking.	Students give various responses. The Students read silently.	

LESSON II

SEMANTIC MAPPING

CLASS: SS 2

TOPIC: COMPREHENSION

DURATION: 45 Minutes

OBJECTIVES: At the end of the lesson, pupils should be able to

(i) Identify some of the technical words in the passage.

(ii) Explain word meanings by using context clues.

(ii) Explain the central idea in the passage

Phrase Time	Teacher Activity	Pupils Activity	Inst. Mat.
2	-He tells the pupils that the topic in today's Lesson is Road Transportation: The Car" *He then writes this boldly on the chalkboard.		

Phrase Time	Teacher's Activity	Pupils' Activity	Inst. Mat.
3.	He tells the pupils to scan through the passage to identify the key words in the Topic. He asks the pupils for the meaning of these words. Teacher records the Meaning on the board. He helps the pupils to identify the relationship between the words.		
	He asks the pupils to read the passage silently in order to get the author's meaning. -Teacher asks pupils some questions on the Passage e.g. - where is the bonnet ?	Pupils were guided by the teacher to match their earlier Suggestion with additional points from the passage.	

LESSON II

CRITICAL READING INSTRUCTIONAL STRATEGY

CLASS: SS 2

TOPIC: COMPREHENSION (ROAD TRANSPORTATION: THE CAR)

DURATION: 45 Minutes

OBJECTIVES: At the end of the lesson, pupils should be able to

i) apply critical thinking reading strategy when treating a passage

ii) Find out the main idea and support main idea in the passage.

hrase Time	Teacher's Activity	Pupils' Activity	Inst. Mat.
	Teacher tells the students, "This is another Comprehension Lesson and that they are going to use the strategy they used the last lesson. -He tells the students the topic of the passage is Transportation : Then -He writes the topic on Chalkboard. He gives the students		

	Students questions to elicit their reaction to the topic "What are the modes of Transportation"? Have you seen one or all of the modes? What is the mode of operation ? What makes it different? Teacher asks the students what the passage is likely to talk about. Teacher asks them to read the passage. Teacher further leads students to generate more discussion on the parts and operation of the car as a means of transportation.	Students give various suggestions. Students hyphotesize on the question. Students give various respones.	

Phase Time	Teacher's Activity	Pupil's Activity	Inst Mat
Introduction	Teacher asks the students about the last assignments. Did they read at home? He introduces the day's lessons on reading comprehension and tells them that they are going to apply the same strategy they have been using on the material. -He tells them the topic is "The Newspaper ". He also writes this on the chalkboard. He leads the pupils to identify the key words in the passage. He writes the words on the board and asks the students for the meanings of these words. Asks students to read the passage silently to get the meaning put across by the writer. He shows the relationship between the key words. Drawing the map.	Students give suggested meanings of some of the word e.g Editor Person who edits or examines the language of newspaper writings Students read the passage silently.	

LESSON III

CLASS: SS 2

TOPIC: COMPREHENSION (THE NEWSPAPER)

DURATION: 45 Minutes

OBJECTIVES: At the end of the Lesson, students should be able to

(a) Explain word meaning by using context clues.
Identify major points in the passage.

Phrase Time	Teacher's Activity	Students' Activity	Inst. Mat.
2	Teacher revises the strategy the class used during the last lesson. He tells them that they ought to approach passage before them with questioning mind. - He tells the students that the topic of the passage for consideration is "The newspaper". - Teacher starts discussion on the topic by giving the pupils questions. How many of you have read newspaper	Students' responses to the various questions posed by the teacher. Students	

	before? What type of writings do we have in newspaper? Who is the writer etc. - He asks the students what is the passage on the newspaper likely to be talking about? - He asks them to read the passage to find out if their guesses were right. - Teacher further leads the students to generate more discussion on what they have read. He asks them more questions.	give various suggestions. Students read silently. Students give various responses.	

LESSON IV

SEMANTIC MAPPING

CLASS: SS 2

TOPIC: COMPREHENSION (Monarchical Ruler)

DURATION: 45 Minutes

OBJECTIVE:

At the end of the lessons, student should be able to

(i) Identify major points in the passage

(ii) Explain word meaning by using context clues.

Phrase Time	Teacher 's Activity	Students Activity	Inst Mat.
	Teacher tells students that the day's lesson on reading comprehension will also be approached by using the strategy the class has been using for some weeks now. Teacher records the words on the chalkboard. He asks the students to read the passage silently for author's meaning. He points out the lavout of the points and helps them to match the suggested meaning with the additional information from the passage. He gives students evaluative questions on the passage.	Pupils with teacher's guide identify words such as "Monarch etc. Students give various suggested meanings. The students read the passage silently.	

LESSON FIVE

SEMANTIC MAPPING

LASS: SS 2

OPIC: COMPREHENSION (Measles)

URATION: 45 Minutes

BJECTIVES: At the end of the lesson, students should be able

:

i) explain word meaning by using context clues

ii) identify some of the technical words in the passage

iii) Describe the relationship of some words and their meanings in relation to the points in the passage.

Phrase Time	Teacher's Activity	Students' Activity	Inst. Mat.
1.	Teacher tells the students, this is another reading comprehension lesson and they are going to continue with the approach they have been using for some times now. He tells the students that the topic in today's lesson is 'Measles. -He leads the students to identify some of the key words from the passage.	Students identify some of the key words as 'measles, 'disease "fatal 'overcrowding etc. Students give suggested meaning for each word. Students guided by	

Teacher writes these key words on the chalkboard. He helps students to establish the relationship between words. He asks the students to read the passage silently in order to get the author's meaning. Teacher answer questions from the students and helps to clarify the point where they do not understand.	Teacher matches their earlier sugges-tions with additional points from the passage	

CRITICAL READING STRATEGY

LESSON V

LASS: SS 2

OPIC: COMPREHENSION (Measles)

URATION: 45 Minutes

BJECTIVE: At the end of the lesson, students should be able

(i) apply critical reading thinking when treating a passage.
(ii) identify main ideas and supporting details.

Phrase Time	Teacher's Activity	Students Activity	Inst. Mat.
1.	He asks students what they think this passage on Measles is likely to talk about. He asks the students to read the passage silently to find out if their guesses were right. Teacher asks more probing questions that further arouse students thinking	Students give various suggestions such as it might talk about causes and how to treat the sickness etc. Students read silently to find out. Students respond and further ask the teacher more questions.	

APPENDIX F

CRITICAL READING INSTRUCTIONAL STRATEGY

The procedure of this strategy is in line with a strategy eveloped by Stauffer (1989) in a research article titled

eading as a Cognitive Function".

The strategy has five instructional steps:

EP 1: Preparation: Activation: Activation and stimulation of students' interest in reading.

Teacher elicits students' experiences related to the topic of the passage. e.g. What is poison?

Teacher tells students to guess what the passage is likely to discuss.

Students are encouraged to defend their hypotheses.

TEP 2: Students read the story silently to find out if their guesses are right.

TEP 3: Teacher asks questions that further arouse the students' thinking e.g. can food poison damage part of the body?

STEP 4: Followed up questions or evaluation: students re – view the content using their teacher's questions

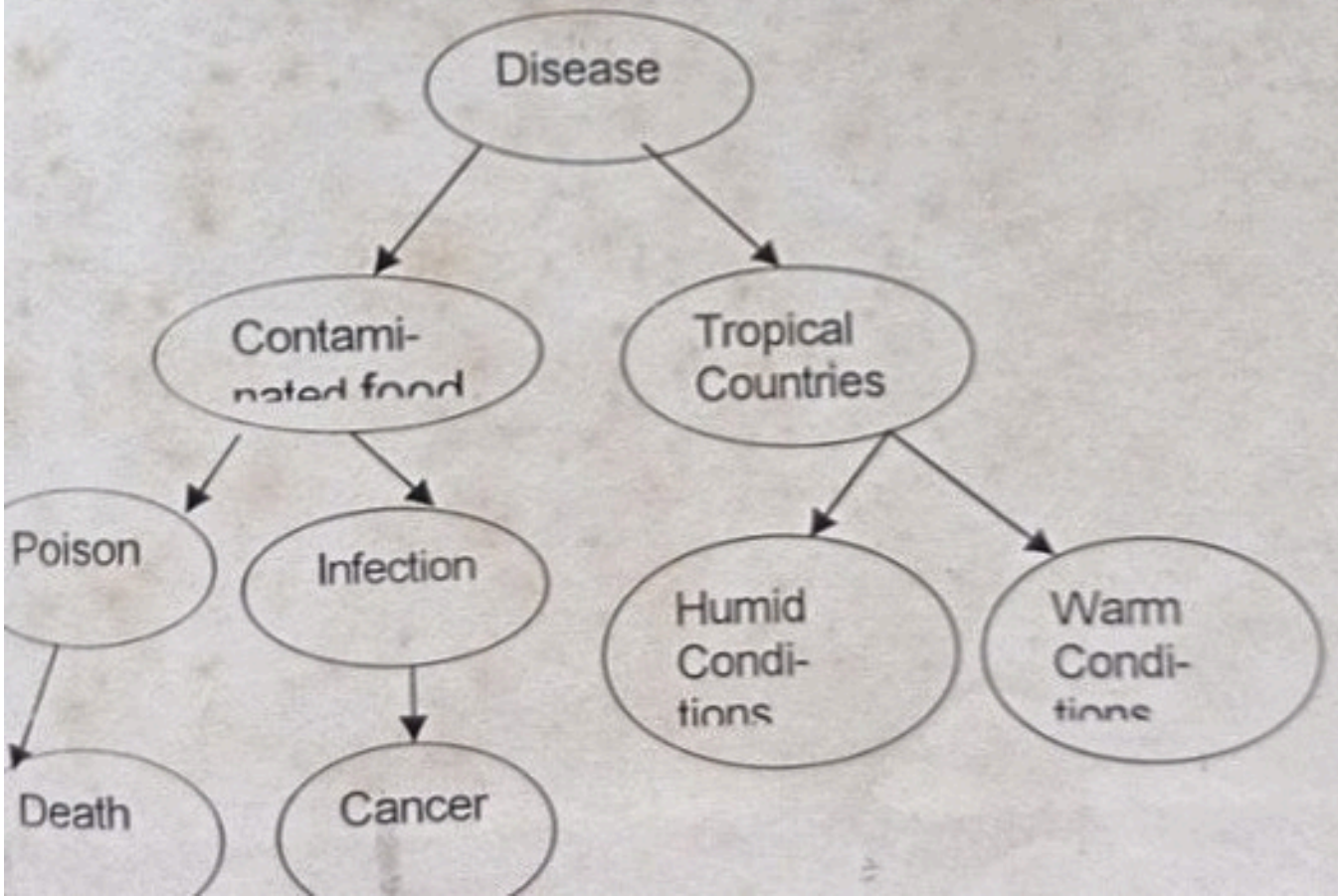
EP 2: Teacher asks students to scan through the passage

and identify words that they (students) think are difficult.

P 3: Students read out some of these words e.g. 'disease contaminated food" warm condition' humid condition, 'tropical countries', 'infection' etc.

EP 4: Teacher lists and makes a map of the words on the chalkboard, Teacher leads the students in the discussion of the meaning of some of the words

opical Map On Food Poisoning And Human Environment



STEP 5: Teacher also goes through the meaning of words and shows their relationship e.g. poison can be in contaminated food and this can cause diseases, which may lead to death.