EFFECTS OF THE USE OF ADVANCE ORGANIZERS ON STUDENTS' ACHIEVEMENT IN READING COMPREHENSION.

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BEING A THESIS WRITTEN IN THE DEPARTMENT OF CURRICULUM AND INSTRUCTIONAL TECHNOLOGY, FACULTY OF EDUCATION. IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTERS OF ART IN EDUCATION {M.A(ED)} ENGLISH LANGUAGE, UNIVERSITY OF BENIN, BENIN CITY.

AUGUST, 2019.

CERTIFICATION

This is to certify that this thesis was written by Deborah Oluwapelumi AKINTEYE (PG/EDU1613798) in the Department of Curriculum And Instructional Technology, Faculty of Education, University of Benin, Benin City.

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_____ _____

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Head of Department

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DEDICATION

This thesis is dedicated to God Almighty, to my parents Pastor & Mrs M.O.E Akinteye, to my siblings-the D's (Daniel, Dorcas, Damaris), to my husband Mr S.O Oloyede and to my daughter Anna Oloyede.

ACKNOWLEDGEMENT

My deepest appreciation goes to the creator of heaven and earth for he strengthened me and made all things possible for me till the very end.

I will like to thank my supervisor Dr. Mrs F.N Ofuani who has the attitude and substance of a genius. Her patience, guidance and persistence made this thesis possible. She continually and convincingly conveyed in me the spirit of adventure in regard to research and excitement in regard to teaching. All these made the completion of this work a reality. My appreciation also goes to Dr. Mrs R.B Danner for her advice, support and suggestions. God bless and reward you ma.

I will like to appreciate all my lecturers, my colleagues (Precious, Joy, Esther, Abigail and Kingsly), Mr. Pedro Ikuereye for his help and sacrifices, Mr. Love Obazee and family for their accommodation and selfless attitudes. God bless you all.

My sincere heartfelt combined with my deepest gratitude goes to my priceless parents Pastor&Mrs M.E.O Akinteye for their personal, financial, spiritual and emotional support. For their sage advice and their undiverted attention and inspiration to go through this program. Without their encouragement, this program would have been abandoned.

To my siblings-the D's (Daniel Dorcas and Damaris). I want to thank you for being a true definition of family and for your support, love and encouragement. May the cord binding us never be broken.

From the deepest part of my heart, I want to express my profound gratitude to my amiable husband, Mr. S.O Oloyede who treasured me for my hard work and supported me with his undiluted love and encouraged me even when I wanted to give up and to my daughter, Anna Oluwanifemi Oloyede.

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ABSTRACT

This study was designed to examine the effects of the use of Advance Organizers on students' achievement in reading comprehension in Ifako-Ijaiye Local Government Area of Lagos State. This study was carried out using the quasi-experimental research design. A sample of 102 junior secondary school two (2) students were drawn from the population of 5396. The reliability coefficient of the instrument for this study is 0.5 using Kuder Richardson coefficient. Four (4) research questions were raised and hypothesized to guide this study. Two instruments were used for this study. Reading Comprehension Achievement Test 1(RCAT 1) and Reading Comprehension Achievement Test 2(RCAT 2). Both were made up of two sections. Section A consists of demographic information such as name of school, serial number and student's gender. Section B consists of two comprehension passages having fifteen multiple choice questions. Students were pretested using RCAT 1 and posttested using RCAT 2. Data collected were analysed using mean, t-test and ANCOVA.

The study revealed that there waqqs q difference in the reading comprehension achievement of students taught with the use of advance organizers. The study also revealed that there was a significant difference between the pretest and posttest scores of students taught reading comprehension with the use of advance organizers. There was no significant difference in reading comprehension achievement of male and female students taught with the use of advance organizers and there was no interaction effect of method by gender on students' achievement in reading comprehension.

Based on the findings, it is concluded that the use of advance organizers enhances students' achievement in reading comprehension over the use of the basal method. Based on this, the study amongst others recommend that teachers should be encouraged to teach reading using the best possible methods like the use of advance organizers which was found to be very effective. Also, teachers should be trained on how to use the method so as to avoid distractions and manage time.

CHAPTER ONE

INTRODUCTION

Background to the Study

English language is a world language which provides a phenomenal opportunity for global communication. In Britain and America, it is spoken as a first language. In countries that were colonized like African countries, it is spoken as a second language while in other countries like China, Germany and Japan; it is spoken as a foreign language. Unlike Chinese that is restricted to only one area, English language is spoken all over the world. This is summarized in Eichhorst (2010) "though Chinese is spoken by a greater number of people, English is spoken around the globe and has wider dispersion than any other language". According to Saur (2006) in Eichhorst (2010), English language is" the most important language in the world". The expansive reach of English is undeniable and unstoppable (Eichhorst, 2010).

English language is a second language in Nigeria, the official language, the *de facto* lingua franca, the language of science and technology, the language of international relations, the language of stability and unity, and the language of the media. English language being the official language makes it the foundation on which almost all educational growth and development are built from the middle basic education to the tertiary institution. English language is a subject in the school curriculum and a credit pass in English language is a pre-requisite for admission into any tertiary institution in Nigeria.

Sogbesan (2006) said that English language is not only a subject but also a medium of learning other school subjects. A student, who could not read and write in English, will find it difficult learning other subjects. As a result, proficiency in English is a necessary criterion for students'

academic success. Even in countries where it is not an official language such as the Netherlands or Sweden, there are many syllabi in science and engineering written in English. It is the dominant language in science and most of the researches and studies found in any scientific field are written in English as well. In fact, the more fluent one is, the better respected he is in the society today.

The practice of teaching the five component areas or segment of English language such as vocabulary development, grammatical structures, speech/spoken English,summary, listening, and reading comprehension in schools had been the focus of many schools. Over the years, there has been a profound failure in the public examinations such as the WAEC and NECO. It has been discovered that the students lack the basic skills of reading and their performances continue to be unsatisfactory. It is therefore sad to note that students fail woefully in English language and even in other core subjects in public examinations (Alegbeleye 2005)

The analysis of students' performance in English language by the West African Examination Council (WAEC) showed that in 2017, fifty- nine point two two percent (59.22%) scored credit and above; in 2016, fifty- two point nine seven percent (52.97%) scored credit and above; In 2015, thirty- eight point six eight percent (38.68%) scored credit and above; In 2014, thirty-one point two eight percent (31.28%) scored credit and above; In 2013, thirty-six point five seven percent (36.57%) scored credit and above; In 2012, thirty-eight point eight one percent (38.81%) scored credit and above; In 2011, thirty six point zero seven percent (36.07%) scored credit and above. The results show that more than half of those who sat for these examinations over the years failed English language which means that these students performed poorly in English language.

Students' poor performances in English language have led to their poor performances in other subjects. This poor performance in English language is a major cause of academic failure. The

SSCE English language has three papers. Paper I: Essay writing, Reading comprehension and Summary writing and it constitutes 60%. Paper II: Multiple choice (lexis and structure) constitutes 25%. Paper III: Test of Oral English constitutes 15%. It should be noted therefore that Paper I which has the highest scores has reading comprehension as one of its major component and it is the focus of this study. This means that any failure in this aspect could definitely go a long way in affecting the total score of a student in English language. The examination conducted by the National Examination Council (NECO) and the various States Ministries of Education across the country have recorded poor performances of students in comprehension and summary sections which originate mainly from the lack of skills and strategies necessary for effective reading comprehension (Chief Examiner's Report NECO 2017).

Students' inability to read fluently is not the only problem facing teachers today but also the students' lack of interest, indifference, their sheer rejection of reading and poor comprehension of the materials read. Comprehension is the essence and basis of reading. So teaching students how to read and comprehend is the number one responsibility of English language teachers. Teachers' attitude and ways of teaching can change the attitude of students towards reading and can also change students' performances either positively or negatively. Good instruction and the use of well known methods of teaching by trained and qualified teachers are the most important means of promoting the development of proficient reading and also the means of preventing reading comprehension problems.

Reading is one of the two receptive skills and it is concerned with ascribing meaning or interpreting symbols. It is a complex activity and is one of the fundamental skills in the personal development of an individual as well as in the learning process. One of the most important skills for educational and professional success according to most researchers is reading. (Yusuf 2010, Oyetunde 2009).

Reading is a communication process fundamental to any formal learning. Reading involves a deliberate attempt to understand and respond accordingly to the feelings, attitude, thoughts, and mood of the author. The phenomenon involved in the communication process of reading is complex. This means that, when reading, a reader is thinking, predicting, questioning, evaluating, defining and redefining. Reading is a communication process involving the transfer of the author's feelings, thought, mood, ideas, attitude, experiences etc. through the medium of written codes to the reader. (Abiola, Funso & Kehinde, 2009).

Every reading process has a rationale. No reader will engage himself/herself in reading without a purpose or an objective. The purpose of reading varies and that reason why an individual engage in reading is the purpose of reading. These purposes can be ranked from less serious ones to the very serious ones. The purposes can be hypothetically categorized into four;

- Reading for recreation/ fun/ pleasure/ entertainment
- Reading for fuller personal development
- Reading for self-education
- Reading for information

Reading and comprehension cannot be separated because the main purpose of reading is to comprehend what is being read. Without comprehension, reading becomes a purposeless activity. Readers interact with the author of a text thereby negotiating, constructing and extracting meaning from the text. Comprehension entails the translation of the information in the text into a representation that is mental and this representation can in turn be accessed later. Comprehension is the ability to interpret, understand, and solve problems before during and after reading.

Comprehension passages in some English language textbooks in Nigeria could be narrative, expository, descriptive or argumentative and contain questions that measure the students' level of understanding of the passage. Students' poor performances in this aspect show that the understanding of the concept is not there and this could be traced to the teachers' methods of teaching. Some teachers use the questions attached to the passages as test and as a result, make the students use these questions to trace answers instead of teaching the necessary skills needed to master the subject and perform well and promote better comprehension skills in later use. Some teachers' orientation, educational background and qualifications may be responsible for the way they handle reading comprehension.

Comprehension is a complex cognition ability requiring the capacity to integrate text information with the knowledge of the listener/reader and resulting in the elaboration of a mental representation. Comprehension is the ability to interpret, analyze and evaluate a text.

An advance organizer is a cognitive instructional strategy used to promote the learning and retention of new information. According to Mayer (2003) "an advance organizer is information that is presented prior to learning and that can be used by the learner to recognize and interpret new incoming information". Advance organizers are useful in prompting the student regarding preexisting concepts and provide a context of general concepts which thereby fosters meaningful learning. There are different types of advance organizers. They are; skimming, graphic organizers, what you **k**now, what you **W**ant to know and what you **L**earnt (KWL) charts, Analogies, Concept map, spoken and written words and drawings.

Among all the types of advance organizers, KWL charts, and concept map were used in this study. While the KWL chart was used before and after reading, concept map was used during and after reading.

KWL Chart is created by Ogle (1986). It is a comprehension strategy used to activate prior knowledge and is completely student centered. It has three columns one for the K which stands for what the student already **K**now, the other column is for **W** which stands for what the student **W**ant to know about the topic and the last column is for **L** which stands for what the student **L**earnt after reading the passage. This chart helps to build what the students already know, creates a focus for the study and makes them comfortable about the material to be read and as a result, their interest and focus may increase.

Concept map is developed by Novak in the 1970s as a means of representing the emerging science knowledge of students. It has subsequently been used in other subjects and has been found very useful in teaching reading comprehension. A concept map is a type of advance organizer used to help students organize and represent knowledge of a subject. A concept map begins with a main idea (or concept) and then branches out to show how that main idea can be broken down into specific topics. It helps the students to brainstorm and generate new ideas, it helps them to discover new concepts. It also helps them to link and see the relationship existing between these concepts, to clearly state and express their ideas and to remember easily.

Statement of the Problem

One of the major concerns of parents and educators is students' consistent failure rate in English language SSCE in particular and other subjects in general. It is amazing and sometimes disheartening when secondary schools students cannot give correct answers to questions given to

them. Their inability to answer these questions could be as a result of their inability to understand what they read. The report from the chief Examiner NECO (2017) revealed that there are evidences of lack of understanding of the content of the given passages and WAEC results over the years have shown students' poor performance in the subject (WAEC, 2011-2017).

Various factors have been discovered to be responsible for failure in reading comprehension ranging from inadequate instruction, insufficient exposure and practice, deficient word recognition skills, deficient memory capacity and functioning to underdeveloped language. It has been noted that many of the students lack effective reading skills and do not read beyond their recommended texts (Arua and Lederer, 2002). The question then is why do students find it difficult to develop all these necessary skills mentioned above, apply the various comprehension strategies, comprehend what they read, recall what they read and apply such developed skills later in life? It could be traced from teacher's method of instruction to students' attitude to reading.

The method(s) used by teachers could also be sources of problems for the students. Is it that teachers are not using the appropriate method of instruction? Similarly, will teachers' change of methods make a difference in the students' achievement in reading comprehension? If teachers are encouraged to use well known methods and strategies in reading, would these change students' view about reading and enhance their performances? Will the use of advance organizers specifically KWL chart and Concept map help to make students interested in reading? This study therefore investigated the effects of the use of advance organizers on secondary school students' achievement in reading comprehension.

Research Questions

To guide this study, four research questions were raised.

1. Is there any difference between the achievement of students taught reading comprehension with the use of advance organizers and those taught with the basal method?

2. Is there any difference in the pretest and posttest scores of students taught reading comprehension with the use of advance organizers?

3. Is there any difference in the achievement of male and female students taught reading comprehension using advance organizers?

4. Is there any interaction effect of method by gender on students' achievement in reading comprehension?

Research Hypotheses

Four (4) research hypotheses were formulated to guide this study and tested at 0.05 level of significant.

1. There is no significant difference in the achievement of students taught reading comprehension with advance organizers and those taught with the basal method.

2. There is no significant difference in the pretest and posttest scores of students taught reading comprehension with the use of advance organizers.

3. There is no significant difference in the achievement of male and female students taught reading comprehension using advance organizers.

4. There is no significant interaction effect of method by gender on students' achievement in reading comprehension.

Purpose of the Study

This study examined the effect of the use of advance organizers on JSS 2 students' achievement in reading comprehension. Specifically, the study sought to:

1. Examine the effect of the use of KWL charts on students' achievement in reading comprehension.

2. Identify the effect of the use of concept map on students' achievement in reading comprehension.

3. Determine whether there is gender difference in students' achievement in reading comprehension using advance organizers.

4. Determine whether there is difference in the pretest and posttest scores of students taught reading comprehension with the use of advance organizers and those taught with the basal method.

5. To find out if there will be any interaction effect of method by gender on students' achievements in reading comprehension.

Significance of the Study

The findings of this research will be beneficial to students, teachers, curriculum planners, government, and future researchers.

Firstly, it is expected that the result of this study will give more information on the effectiveness of the use of advance organizers. Secondly, in teaching comprehension, English teachers can adopt this strategy in teaching reading comprehension and thereby minimize the problem of students' lack of interest in reading comprehension. Also, the findings of this study will help students to change their views on reading as the use of advance organizers teaching will sharpen their interest in reading and enhance their performance in English language. The result of the study can also help

the government to see the importance of sensitizing the public especially teachers and instructors on the use of advance organizers. This will also help curriculum planners make effective curriculum for schools by selecting appropriate advance organizers for each topic and level. Lastly, this study will be useful to future researchers as a reference on the use of advance organizers in teaching comprehension reading in particular and other aspects of English language.

Scope/Delimitation of the Study

The scope of this study focused on the effects of advance organizers on students' achievement in reading comprehension. The research was carried out among public junior secondary school two (2) students. It was limited to only two (2) public secondary schools in Ifako-Ijaiye Local Government Area of Lagos State.

Operational Definition of the Terms

The following words are defined or explained as used in this study.

Advance Organizer: An advance organizer is simply a device that is used in order to help readers access efficiently relevant knowledge.

KWL Chart; It is a chart with three columns. The first column is K and it stands for what the student already **K**now, the second column is **W** and it stands for what the student **W**ant to know while the last column is **L** which stands for what the student **L**earnt after the lesson.

Concept Map; A concept map is a type of advance organizer used to help students organize and represent knowledge of a subject. It begins with a main idea (or concept) and then branches out to show how that main idea can be broken down into specific topics.

Achievement: Achievement is the quality and quantity of a student's work measured by a standardized test.

Reading: Reading is an active process in which readers interact with a written material to make meaning out of it. It is the ability to interpret symbols and signs.

Comprehension: Comprehension is the ability to understand what has been read. It is the ability to decode, make connections between what is read and what is already known and think deeply about what has been read.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The main objective of this chapter is to outline and explain the existing literature in this aspect:

An attempt is made to survey a variety of theoretical explanations on the basic concepts such as:

- Theoretical framework
- Concept of reading
- Concept of reading comprehension
- Methods of teaching reading comprehension
- Factors affecting reading comprehension
- Advance organizers in teaching
- Gender and reading
- Summary of literature review

Theoretical Framework

The theoretical framework of this study is hinged on two different theories which are; metacognition theory and schema theory.

Metacognition Theory

Metacognition is defined as 'thinking about your thinking' by an American developmental psychologist John Flavel in 1979. The metacognition theory is broadly defined as a systematic framework that is used to explain and direct cognition, metacognitive knowledge and regulatory skills. It is primarily concerned with mental processes related to task such as strategies for cognitive performance improvement and knowing ones mental states.

Meta means ‘beyond’ so it means ‘thinking beyond’ which means it goes beyond just thinking about what is being read. Flavell (1979) viewed metacognition as ‘learners’ knowledge of their own cognition. It is seen as learners’ awareness and control of their own learning process which is characterized as the ability to recognize, evaluate, reconstruct (where necessary) existing knowledge. Brown and Baker (1984) defined metacognition knowledge by emphasizing a difference between static and strategic knowledge. Static knowledge is what people are able to verbalize about cognition; whereas, strategic knowledge consists of the strategies that people use to regulate a particular cognitive activity.

Baker and Brown (1984) later modified their definition of metacognition claiming that it is “an awareness of what skills, strategies and resources are needed to perform a task effectively; and the ability to use self-regulatory mechanisms to ensure successful completion of a task. (p, 345).

Metacognition refers to the knowledge and control that we have over our cognitive processes. With regard to reading, it is common to talk about metacognitive awareness (what we know) and metacognitive regulation or control (knowing when, where, and how to use strategies, that is, what we can do). On a general level, metacognition includes awareness and control of planning, monitoring, repairing, revising, summarizing, and evaluating. Essentially, we learn awareness of our comprehension processing. More specifically, we learn strategies that support our comprehension (our awareness of strategies) and we learn how to carry out these strategies effectively (our control of strategies) (Baker, 2002, 2008; Pressley, 2002).

According to Flavell (1999), metacognition is “thinking about your thinking.” This is the most straightforward definition because in all their definitions, explanations and illustrations, it has been discovered that the basic thing is ‘thinking’ which is about one’s own thinking. Though it needs to

be elaborated because of the processes involved such as reflecting, predicting, analyzing, drawing conclusions and practicing, yet, the foundation still stands on the definition "thinking about your thinking". Paris and his Colleague (Paris and Winograd 1990) identified two essential features in their definition of metacognition: 'self-appraisal' and 'self-management' of cognition. Self-appraisal of cognition comprises of the reflection about one's understanding, abilities and affective condition during reading while self-management refers to 'metacognition in action'; that is mental processes that help to orchestrate aspects of problem solving (Paris and Winograd 1990).

In any kind of cognitive transaction with the human and non human environment, a variety of information processing activities may go on. Flavell (1979) defines metacognition as "the active monitoring, consequent regulation and orchestration of these processes in relation to the cognitive objects or data on which they bear, usually in service of some concrete goal or objective" It means that there are processes involved in reading. Actively monitoring and regulating these processes is what metacognition is all about (p, 232)

There are three components of metacognition which are;

I. Metacognitive knowledge
II. Metacognitive regulation
III. Metacognitive experience

1. Metacognitive knowledge: It is one's awareness of metacognition. It is defined by Flavell (1976) as "one's knowledge or belief about the factors that affect cognitive activities" that is, it refers to one's knowledge about one's cognition in general. Metacognitive knowledge includes the following:

- Declarative Knowledge (word knowledge); It is the knowledge about oneself as a learner and about what can influence one's performance.
- Procedural knowledge: This is knowledge about the strategies to do things. High degree of procedural knowledge can allow one to perform tasks more automatically.
- Conditional knowledge: Conditional knowledge is knowledge about how and when declarative and procedural knowledge can be used. It helps to use them more effectively.

2. Metacognitive regulation: This has to do with cognition and learning experiences regulation through a set of events and activities that help in controlling one's learning. The essential skills needed in metacognition regulations are:
   - Planning: This is the careful selection of strategies appropriately and the correct allocation of task performance resources that can be effectively used.
   - Monitoring: It is the awareness of one's comprehension and task performances.
   - Evaluating: It is the appraisal of the final product of a task and the performance of the task efficiently.
3. Metacognitive experience: These are the experiences that have something to do with the present, current, on-going cognitive activities. These experiences may be fully or less fully conscious and verbalizable, brief or lengthy, simple or complex in content

Metacognition as a Comprehension Reading Strategy.

Reading, whether in L1 or L2, is a "cognitive enterprise", which occurs in part as a result of the interaction among the reader, the text, and the context in which reading takes place (Flavell, 1979). To accomplish the task of comprehending the text successfully, the reader must utilize metacognitive knowledge and must invoke conscious and deliberate strategies. The readers'

metacognitive knowledge about reading may be influenced by a number of factors, including previous experiences, beliefs, culture-specific instructional practices, and, in the case of non-native readers, proficiency in L2, and it may be triggered, consciously or unconsciously, when the reader encounters a specific reading task. The readers' metacognitive knowledge about reading includes an awareness of a variety of reading strategies and of the fact that the cognitive enterprise of reading is influenced by this metacognitive awareness of reading strategies. It is the combination of the conscious awareness of reading, strategic reading processes, and the actual utilization of reading strategies that distinguishes skilled from unskilled readers.

As Brown, Armbruster and Baker (1986) have argued, "metacognition plays a vital role in reading comprehension" (p, 49). The term metacognition refers to one's understanding of any cognitive process. The context of reading is usually understood as consisting of two types of cognition: First, one's knowledge of strategies for learning from texts, and, second, the control readers have of their own actions while reading for different purposes. Successful readers monitor their reading and the state of their learning; they use strategies, adjust effort appropriately, and evaluate the success of their ongoing efforts to understand (Brown, Armbruster & Baker, 1986).

Metacognitive control, in which the reader consciously directs the reasoning process, is a particularly important aspect of strategic reading. When readers are conscious of the reasoning involved in reading, they can access and apply that reasoning to similar reading in future situations.

Metacognitive reading strategies

Metacognitive reading strategies are conscious means by which students monitor their own reading processes including evaluating the effectiveness of cognitive strategies being used. Metacognitive strategies may involve, for example, planning how to approach the reading of a text, testing, and

revising according to purpose and time available (Devine, 1993). These kinds of strategy might also include Sheorey and Mokhtari (2001)'s "support strategies" such as the knowledge of how to use tools for comprehension such as dictionaries, taking notes or highlighting important text (p, 436). Metacognitive strategies are the ways through which a learner can know about his/her learning. They are the activities that help an individual to think about his/her learning. They are the mental operations involved when a reader consciously attempts a text with the aim of achieving a purposeful reading activity by making sense of what has been read. Adler (2001) says that comprehension strategies give conscious plans that involve sets of steps that a good reader uses to make sense of a text. The importance of comprehension strategies cannot be overemphasized and it goes a long way in helping students become purposeful, active readers who are independent and in control of their own reading comprehension.

These strategies according to Baker and Brown (1984) are;

- planning (figuring out how to begin or continue),
- predicting (estimating how much will be remembered or understood, or how much time it will take to complete a particular cognitive task),
- guessing (hypothesizing an answer before reaching a complete cognitive solution, and
- Monitoring (continually deciding how well progress is being made toward the accomplishment of some cognitive goal.

Metacognitive reading comprehension strategies can positively impact students who seem to be good as well as those who have learning disabilities by helping to build an appropriate plan for learning information. The following ways are used for the monitoring of one’s comprehension:

connection making, prediction making, inferences making, context clues uses, text features uses, text structures identification, advance organizers use, commands and questions.

According to Carrell, Gajdusek and Wise (1998), examples of specific metacognitive strategies in reading may include:

- Establishing objectives in reading,
- Evaluating reading materials,
- Repairing miscomprehension,
- Evaluating the ongoing understanding of the text,
- Analyzing the text and paragraph structure to clarify the author's intention,
- Adjusting reading speed and selective cognitive strategies accordingly, and
- Engaging in self-questioning to determine if the objectives have been reached.

Thus, reading is a metacognitive, as well as a cognitive process. While cognitive strategies refer to deliberate actions that readers take in their efforts to understand texts, metacognitive strategies emphasize the monitoring and regulative mechanisms that readers consciously use to enhance comprehension.

Palinesar and Brown (1984) identified four activities that they believe aid comprehension fostering and monitoring activities. These activities are; self-questioning, summarizing, identifying, and predicting. According to Pressley (2002), there are many ways in which students can demonstrate their understanding in the use of these strategies; they locate and recall information; draw on the knowledge of text structures and text organizers, write short reflective responses, complete multiple choice questions, think deeply and express ideas verbally, complete descriptions, recognize casual relationships, make logical connections, interpret graphics and images and identify multiple points

of view and specific details. According to research, less able comprehenders usually focus more on word accuracy rather than comprehension monitoring and generally have weak metacognition skills. (Cain&Oakhil, 1999).

The implication of metacognition theory to this study is that students need to think about their thinking when reading a comprehension passage to really understand the text. This is necessary because the students can be asked to replace any word, phrase or sentence, they can also be asked to interpret a given sentence, summarize the passage or even give a suitable title for the passage. If this metacognitive ability is improved in them, they will be able to face any given passage no matter how complex it may be as they progress.

Advance Organizers (concept map) as a metacognitive strategy will aid proper understanding of the text and will make it easy for them to answer any question given to them on the passage because to map the concepts, the students need to think and identify the important concepts, see their relevance and relationship and map the concepts.

According to Fogarty (1994), there are three main reasons why metacognitive strategies are taught:

- The development of deeper understanding of the text
- The development of student thinking to a higher level
- The development of students into adulthood.

The students will not be faced with the same comprehension passages all through, this means that for them to be able to perform well in other passages given to them whether in their schools or in external examinations, they need to learn how to think while reading as well as monitor their learning which can be achieved through the use of concept map.

Schema Theory

Schema theory was firstly introduced in 1932 through the work of British psychologist Sir Frederic Bartlett and further developed in 1972 by Richard Anderson. Bartlett (1932) said there are high level structures in the human memory known as schemas, each of which perform some functions such as summarizing our knowledge about the things connected to a particular topic/object and also help in the understanding of conversations and texts as well as real life event since it represent the general knowledge. The schema theory is based on the notion that the past acquired knowledge can be used in the creation of mental framework that helps a reader to make sense of the new experience. Smith (1994) said "schema is also known as extensive representations of more general patterns or regularities that occur in our experiences". Schema is described as the mental pattern of past experiences that help the organization and perception of new information. Anderson (1994) presented a research that shows that recall of information is affected by the reader schemata and explains that a reader comprehends a message when he/she is able to bring to mind a schema that gives account of the object and events described in the message. This means that attention and absorption of new knowledge is influenced by schemata. But it should be noted that schemata has a tendency of remaining unchanged, even in the face of contradictory information.

Ajideh (2003) sees schema as a hypothetical mental structure for representing universal concept stored in the memory. Carrel (1991) opined that schema theory is a theory about how knowledge is represented and how the representation facilitates the use of knowledge in particular ways. Schemata are used to organize current knowledge and provide a framework for future understanding. Cohen, Kiss and Le vei (1993) see schemata as packets of information stored in the memory representing general knowledge about objects, situations, events or actions. The idea about schema is that there is nothing new. Schema theorists opine that people comprehend something

only when they can relate it to something they already know and also when they can relate the new experience to an existing knowledge structure. The procedure of interpretation according to schema theory is guided by the principles that every input is mapped against existing schema and that all aspects of that schema must be harmonious with the new information.

The schema theory falls into the cognitive theory which is the top-down model. It is closely related to the top-down which sees comprehension as the process of constructing meaning in a direct way. A process in which readers sample the text for information and contrast it with their knowledge, make hypotheses confirms or rejects them and make new hypotheses (Ofuani 2013). Other cognitive theorists like Ausubel asserted that learning is based on schemata or mental structures by which students organize their perceived environment. Ausubel suggested that Advance Organizers help students activate prior knowledge in the new instructional context and make the instructional process meaningful to the students (Ausubel, 2000).

Rumelhart (1977) describe schema as "a building block of precognitive knowledge which is used in the process of interpreting sensory data, in retrieving information from the memory, allocating resources and in guiding the flow of the processing system. Carrel and Eisterhold (1983) proposed that a 'text itself does not carry meaning'. The text is only a guide that helps a reader to create and bring meaning to the text and so comprehension can only take place when a reader's background knowledge interacts with the text. Thus, it is through the activation of schemata that old knowledge influences new information. So basically, schemata are psychological concepts that were proposed as a form of mental representation for selected chunks of complex knowledge, which are then stored in the long-term memory (Pappas, 2014).

Pappas, (2014) explained four key elements of a schema. They are:

1. An individual can memorize and use a schema without even realizing it.
2. Once a schema is developed, it tends to be stable over a long period of time.
3. Human mind uses schemata to organize, retrieve and encode chunks of important information.
4. Schemata are accumulated over time and through different experiences.

Bartlett (1932) suggested that human beings apparently possess generic knowledge in the form of unconscious mental structures (schemata) and that these structures produce schematized errors in recall when they interact with incoming information. A schema is a generalized description or a conceptual system for understanding knowledge. To Rumelhart (1980), "all knowledge is packaged into units, these units are the schemata". It is an abstract structure of knowledge stored.

Like Wu and Wang (2007) identified three types of schema: they are linguistic schema, formal schema and content schema.

Linguistic schema: It refers to the knowledge a reader has about the organization of words to form a sentence. It is the level of proficiency in vocabulary and grammar of a reader. The more the linguistic schema, the faster it is to retrieve information from a text

Formal schema: It is the rhetorical structure of a text. It is the knowledge or the genre structure of each text. It is the way a text differs from another. It could be fictional, formal letter, a scientific essay etc. this knowledge gives the reader a guideline or basis for predicting what a text will look like (Smith, 1994).

Content schema: This refers to the knowledge a reader has about the subject matter of a text. It is the background knowledge of the topic to be discussed or read. The formality to the topic will aid

easy comprehension. Carrel (1988) said that a student's apparent reading problems may be as a result of the problem of insufficient background knowledge.

The implication of this theory to this study is that KWL Chart which is an Advance Organizer can only be done through the activation of schema. According to Richard Anderson (1972), the schema theory is based on the notion that the past acquired knowledge can be used in the creation of mental framework that helps a reader to make sense of the new experience. To fill the first column **K** (what you **k**now), the students need to bring back to mind the existing knowledge. The past acquired knowledge brought to mind will make them see what is missing and this will help them fill the second column **W** (what you **w**ant to know). The last column **L** (what you learnt) will be filled after the lesson and the students need to bring to mind what they learnt at the course of the lesson to be able to fill this.

Concept of Reading

Reading is the ability to decode what has been encoded. It means associating/ giving meaning to symbols/signs. Reading is the ability to interpret what a writer has written. Okunowo (2004) defined reading as "getting the major and collaborating ideas in a given passage, reacting and responding to the message of a passage, being able to recall, deduce, interpreted meanings from the passage and finally, being able to functionally rearrange or reorganize and synthesis the ideas and meaning of the passage as may be required". It means that reading is a multidimensional process that involves the active participation of a reader to carry out all these activities to achieve the purpose of reading.

Reading is the act of getting something from a printed word by making sense of what is written. Ogunyemi(2005) explained reading as a skill which helps an individual to expand experience,

identify, extend, and intensify deeper understanding of not only him but also, others around him and the world as a whole. Richards and Renandya (2002), see reading as a skill which is highly valued by students and teachers. According to Nunan (2006), reading is a set of skills that involves making sense and deriving meaning from a printed word. This means that reading is the active relationship and interaction between the reader and the writer over a particular issue or topic. It means reading has taken place when a reader is able to receive and decode the message being passed by a writer. Reading goes beyond the surface level of understanding but also the deeper level of understanding of the meaning attributed to a letter, word, phrase, sentence, paragraph and a whole text. Reading might be to discover or learn a new thing, rearrange or build the existing knowledge or to discard existing knowledge.

Reading is not a passive process but an activity where the reader actively activate his prior knowledge, guess, predict and confirm or reject the hypothesis formulated. Arua (2009) view reading as an activity rather than a passive process in which the reader is actively involved in bringing something to the process and activating his background knowledge, querying, assessing, evaluating, critiquing the content and form of the text and agreeing or disagreeing with the facts, opinions and style of the text. Collins and Onwuegbuzie (2002) said reading is "a mental process" and Harmer (1983) said reading "involves both the eyes and the brain where the eyes receive message and the brain performs the interpretation of the message received. So according to Collins and Onwuegbuzie, the brain performs the real act of reading which makes reading a mental process of decoding meaning of information about print sent to the brain. Widdowson (1979) in Hedge (2000) in confirming reading as an active activity explains reading as "a dialogue going on between the reader and the text or between the reader and the author ". Reading is more than deciphering because it calls for analyzing, interacting, and interpreting the message encoded in the text. Reading

is not only an interactive activity but also a complex one. So, reading is a process which is cognitive and deals with obtaining and extracting information from materials or devices.

In all the definitions of reading, the words relevant to its understanding according to Abiola, Funsho and Kehinde (2009), are recognition, comprehension, retention, and recall.

*Recognition***:** This is the ability to find letter or symbol meaningful. It is the process of ascribing meaning through the process of association- a principle in psychology. This therefore means that recognition is a process of receiving meaning through the background information already had by the reader. Unoh (1969) said it is a process if seeking familiarity or relationship of stimulus (e.g., a word, a phrase, an idea or concept) to something previously known but apparently forgotten or not thought about". It is the ability to identify the meaning of words as they appear on the printed page.

*Retention***:** This is the act of organizing or storing in the brain familiar or meaningful units, materials, information, facts, or other expressions that have been understood. It is this act of retention that makes recall feasible.

Recall: It is the measure or quantity of what is actually remembered. A reader can easily recall any information recognized, comprehended and retained. It is evident that all these activities are interconnected. This means, it is one that triggers the next in that order. For example, recognition set off comprehension then to retention and then to recall. So the former is always a requisite to the latter. However, reading can be oral or silent.

A good reader will read efficiently. Reading that is not efficient will throw its purpose into jeopardy. The efficiency of any reading depends on the purpose of reading. In other words, the purpose of reading will usually determine the appropriate type of reading and the relevant skills to be used. The ability to locate the main ideas or specific information in a reading selection with the required

speed needs to be developed to read with better understanding. When a reader read purposefully, when a reading is done with criticism, analysis and evaluation, when the reading pace is detected by the difficulty level and the nature of the reading material, efficient reading is in operation [Abiola, Funsho&Kehinde (2009:19)]

It has been discovered that the reading skills and abilities can be Improved (Lindsey & Knight, 2006 and Sariscoban, 2002) by the teacher if the teacher adopts a three- phase approach which is the pre-reading phase, reading phase, and the post-reading phase.

The Pre-reading phase provides an overview that can increase reading speed and efficiency. Pre-reading typically involves looking at (and thinking about titles, chapter introductions, summaries, headings, subheadings, study questions, and conclusions. Pre-reading encompasses all of the things that you do, before you start reading, to increase your capacity to understand the material. In many cases, taking just a few minutes to learn more about what you are about to read can dramatically increase your reading comprehension and retention.

Pre-reading includes four steps: Preview, Predict, Prior Knowledge, and Purpose (Norton, 2007). Previewing is taking a quick look at a reading before trying to understand the whole thing. Predicting is looking at clues from what you read, see, or already know to figure out what information you are likely to get from the reading. Prior knowledge is what you know about a subject before you begin a new reading about it. Purpose is figuring out an author's purpose to help you understand what you read. Pre reading build a bridge between the reading material and students' background knowledge.

The reading phase is the stage where students engage in a critical reading to understand the writer's purpose, the language structure and the logical organization in the text so as to develop the

comprehension of the text. The reading phase helps students infer, critic or make judgments. It helps them to remember the importance of vocabulary for contextual clues for meaning and guess the meaning of unfamiliar words. It also assists students to know the general as well as specific intonations that will help them to generalize the issue being discussed.

*The Post-reading phase***:** The post-reading phase provides students a way to summarize, reflect, and question what they have just read. It is an important component of the pre, and during reading strategy. It is aimed at making students use their acquired knowledge in similar readings, to integrate their reading skills with other language skills of listening, speaking and writing as well as to use the key words to summarize the passage read.

Importance of Reading

The importance of reading cannot be overemphasized. Badir and Sadiq (2002:90) clarify the importance of reading a follows:

1. Reading is very important as it helps to discover new things: We are in a world where new things are discovered every day. Reading helps discover all these discoveries and the only way to take advantage of this age where information of overflows is reading. Through reading, one is exposed to new things, information etc.
2. Reading helps to perform better: It helps in the improvement of oneself. It also helps in the understanding of the world and how to be a better individual.
3. Reading helps improve our understanding: There are lots of things we don't understand but reading helps in understanding them. Reading develops the mind.
4. Reading is fundamental to functioning in the society today: To be relevant in this today's society, one must be friends with books.

5. It is a means for teaching good manners and values for pupils. In addition, it develops critical thinking and increases students' ability to concentrate. Abu (2010:15).

Badir (2009:33) concludes that reading is an essential skill for students who are leaning English as a Foreign language and the development of good reading ability will greatly help them progress in other academic areas. Reading is a very necessary skill in life and people who do cannot read well do not do well in school and miss out a lot of things in life, (Swihart, 2009:2). Reading can be conceived as the material that enables basic instrumental learning of others, therefore, it becomes an essential activity for the acquisition of knowledge (Delia, 2003)

Ways of Reading.

There are two different ways of reading. They are loud reading and silent reading.

Loud Reading: Reading aloud is a way of reading performed loudly with the labial movements and vibration of the vocal cords. It promotes students' syntactical development Chomsky (1972). Morrow and Gambrella (2002) said reading aloud can increase listening comprehension skills. Lynch-Brown and Bratham (2002) conclude that reading aloud increases students' vocabulary. Reading aloud can be used for certain purposes such as checking students' pronunciation, word stress, pauses, intonation and understanding. Reading aloud is not just for beginner- level English learners. It can also help skilled English readers comprehend dense, challenging texts.

Reading aloud is very important. It helps to test ones language ability, it helps to improve one's writing, it builds motivation, curiosity and memory, it helps learners to cope in times of stress or anxiety, it enlarges and enhances learners' world, it creates positive association with books and reading.

Family literacy foundation, (2002:1) illustrates the benefits of reading out loud with children as follows: It helps the children to develop individual interests in certain subjects, children are introduced to new concepts such as colors, shapes etc., children's self-esteem grow as they experience the security of having parents or other caring persons read out loud with them, children learn positive behavior patterns and social values, children build listening skills, memory and language skills, children improve imagination and creativity.

Silent Reading: Silent reading is a type of reading performed silently without any labial movements or vibration of the vocal cords. It is a skill needed as students move from one educational stage to the other. Silent reading is a process of absorbing thought from the text unlike loud reading that provides thought to the printed page. Silent reading gets the reader straight to the writer's thought and is simply the interpretation of the material being read through a series of eye sweeps without delay resulting from vocalization. Vocalization reduces and limits the speed of oral readers but does not affect silent readers. Silent reading is done in a more relaxed mood and is considered recreational or independent reading. Silent reading encourages concentration which improves students' understanding and makes them focus on the meaning of the text rather than pronunciation.

Teachers' Corner, (2012) highlights the following importance of reading silently. They are: It helps to read faster, it improves understanding, it helps ignore words not needed, it helps to move quickly to the information needed, and it gives a good model and build confidence.

Types of Reading

Scholars divided reading into two depending on the purpose of reading, the length of the text, the objective, and the text to be read. According to Nuttal, (1996) the two types of reading are extensive

and intensive reading and they are complementary. But according to Brown (1989), the types of reading can be categorized using the ways of reading as follows: Loud Reading and Silent Reading

Under silent reading, we have; Intensive Reading (Linguistic and content), and Extensive Reading (Skimming and scanning)

From all the classifications, the two major types of reading are; intensive and extensive reading.

1. *Intensive Reading*: According to Ali (2010), intensive reading involves learners reading in details with specific learning aims and tasks. It involves learners reading with specific learning strategies or skills. A situation where the text is treated as an end in itself. Brown (1989) explains that intensive reading "calls attention to grammatical forms, discourse markers, and other surface structure details for the purpose of understanding literal meaning, implications, rhetorical relationships and the like". Intensive reading is sometimes called "narrow reading". Long and Richards (1987), define it as "a 'detailed in class' analysis, led by the teacher, of vocabulary and grammar points, in a short passage". It may be a situation where student read a topic in several texts or several texts by the same author. As a result, the students are exposed to a text either the content or grammar aspect of it, the more understanding takes place. Intensive reading is a process of learning instead of acquisition. Kailani and Muqattash (2008), also suggest that intensive reading is a classroom task carried out under the teacher's guidance.

Some of the characteristics of intensive reading are: it is usually classroom based, students focus on linguistic or semantic details of a reading, students identify key vocabulary, readers are intensely involved in looking inside the text, texts are read carefully and thoroughly, again and again, the aim is to build more language knowledge rather than simple practice the skill of reading etc. in intensive

reading, the skills the learners developed are: rapid reading practice and interpretation of text using word attack skills, text attack skills and non-text information.

Munby (1979) suggest four categories of questions that may be used in intensive reading. They are:

1. Plain sense: questions to understand the factual, exact surface meaning in the text

2. Implications: questions to make inference and become sensitive to emotional tone and figurative language.

3. Relationship and thought: questions to understand the relationship and thoughts between sentences or paragraphs.

4. Projective: requiring the integration of information from the text to one's own background information.

Advantages of Intensive Reading

1. It aids comprehension. It provides a check on the degree of comprehension for individual learners.
2. It helps to develop a greater control of language. Learners develop literacy skills necessary to generate productive expressions.
3. It helps to learn how to use and monitor effective reading strategies.
4. It provides a base to study structure, vocabulary and idioms. The students are more aware of text organization.

Disadvantages of Intensive Reading

1. The small amount of text available gives little chance to learn language patterns.
2. Students may associate reading with testing and not pleasure because exercise and assessment usually follow intensive reading.
3. Reading becomes useless when the students are not interested in the text because it was chosen by the teacher.
4. In a class with multi-reading abilities, students may not be able to read at their own pace and level since everyone is given the same materials to read.

Extensive Reading

Extensive reading according to Haboush, (2010) means to read at length, for pleasure, focused and relaxed in a slow way. Brown, (1989) defines extensive reading as "a type of reading carried out to achieve a general understanding of a text". Long and Richards (1971), identify extensive reading as "occurring when students read large amounts of High interest materials, usually out of class, concentrating on meaning, 'reading for gist', and skipping unknown words". Extensive reading is a kind of reading for enjoyment and to build confidence. It is to comprehend main ideas and not specific details.

Ali (2010) said extensive reading can be defined as "free, voluntary reading that involves rapid reading of large amounts of materials or longer reading for general understanding with focus on the meaning of what is being read than on the language ". Extensive reading is a situation where the students embark on a reading task to gain more knowledge and understand the subject matter (Pelumi, 2018). It widens the readers' intellectual exposure and improves the general knowledge of the reader.

The characteristics of extensive reading according to Day and Bamford (1980) are; students read as much as possible, students select the text to read, there are varieties of reading materials available on a range of topics, reading is its own reward, reading speed is usually faster, it is individual and silent, reading materials are well within the linguistic competence of the students in terms of vocabulary and grammar, the teacher is the role model.

Advantages of Extensive Reading

1. It helps to develop a reading habit
2. Students gain more confidence in reading.
3. Students attitude towards reading is improved
4. They acquire incidental grammatical competence
5. It builds students background knowledge.

Disadvantages of Extensive Reading

1. It may be costly and time consuming to set up materials if they are not readily available
2. Reading each student's journals and reports can be time-consuming and stressful for teachers.
3. It may be difficult to keep students changed to read more difficult texts.
4. Students already exposed to intensive reading may find it difficult coping with extensive reading and find it useless.

The other types of reading are:

Scanning: it is a quick reading focused on locating specific information. It involves eye movements which is quick. It is used often with technical, scientific or professional materials to locate specific information and it is a valuable skill for second language learners.

Skimming: It is a quick reading to get to know the general meaning of a passage. It may be aimed to know how the passage is organized. That is, the Structure of the text. It is a more complex task because it requires the reader to organize and remember some of the information given by the author, not just to locate it. It is a tool in which author's sequence can be observed.

Concept of Reading Comprehension

Comprehension is the ability to understand a written text, when students comprehend a written passage, they construct meaning from the words to understand the passage as a while (Paulsen & IRIS center, 2004). Reading comprehension is the ability to process text, understand its meaning, and to integrate it with what the reader already knows. The level at which an individual understands a text is comprehension. Comprehension is the basis of reading and the active process of constructing meaning from a text (Durkin, 1993). Reading comprehension is a construction process which involves all the elements of the reading process working together to create a representation of what the writer is passing across.

The National Reading Panel, (2000) emphasized the fact that comprehension "is an active process between the reader and a text, a process that is both intentional and thoughtful". The interactions between the written words trigger knowledge outside the text. Comprehension is dependent upon four language skills: phonology, syntax, semantics, and pragmatics because it is a creative multi-faceted process. Comprehension includes putting words together to form phrases into sentences,

into paragraphs, into a chapter or a whole text and giving it interpretation. When learners comprehend, they interpret, integrate, critique, infer, analyze, connect and evaluate ideas into texts.

Badr (2011), define reading comprehension as " the ability to communicate a text leading an integrated process that involves decoding vocabulary and sentences, employing prior knowledge relevant to the text and using cognitive and metacognitive strategies in order to make sense and to get the target message the author wants to convey". Comprehension us seen as an important goal of the reading process which is influenced by several factors. The deciding process comprises of one level of the reading comprehension. Meaning and deep understanding occurs when an individual has prior knowledge in the memory to connect with visual information received from the text (Kintsch & Kintsch, 2005).

Block (2002), states that reading comprehension is "the thinking process used to make meaning of what a person reads". Abu (2010) concludes that comprehension is the final goal of reading, whether a person reads for pleasure, to learn, or to locate information. It is the “process of decoding and constructing meaning through interaction and involvement with a written text". Readers end up constructing meaning from a text as they read, absorb new information and compare it with their pre-existing knowledge.

The National Reading Panel, (2000) promotes seven categories of text comprehension. They are; monitoring, cooperative learning, use of graphic organizers, students answering questions and getting immediate feedbacks, students generating their own questions as a means of aiding comprehension, summarizing and generalizing. The reading comprehension levels involves two levels of processing which are shallow (low level) processing and deep (high level) processing. The deep processing involves semantic processing which happens when we encode the meaning of a

word and relate it to similar words. Shallow processing involves structural and phonemic recognition, the processing of sentence and word structure

Reading comprehension is the evolution of thoughts that occur as we read. Nofal (2003:10) said that reading comprehension is not a purely verbal process, for the written symbols to have meaning, they must be associated with the objects, actions, and qualities they represent. There are some barriers readers must overcome in reading comprehension. First, readers must be able to identify weaknesses in specific cognitive skills. Second, readers must have procedures for enhancing those specific skills rather than general interventions that target a limited number of skills without regard for identified strengths or weaknesses. Finally, readers have to recognize that several components of comprehension such as prior knowledge and vocabulary are acquired over time, making them difficult targets for training and intervention.

Research studies on reading comprehension have shown that there are certain numbers of strategies used to comprehend a text. They are:

1. *Making inferences*: it is also known as 'reading between the lines'. It is the connection action of the indirectly linked parts of the text to form a meaningful conclusion. It is a process of looking for the connections that lies between the texts.

2. *Planning and monitoring*: it is the readers' mental awareness and their ability to control their comprehension by way of awareness. The reader review the text, ask questions, use context clues and other evaluation strategies to clarify the texts and ideas thus monitoring their level of understanding.

3. *Asking questions*: readers ask questions to solidify their understanding of passages of texts. It helps to be completely objective in order to find various meanings within the text.

4. *Determining importance*: this is noticing and identifying the important ideas and messages within the text. The identification of the direct and indirect ideas and summarize their relevance.

5. *Visualizing*: a sensory- driven strategy that readers use to form mental and visual images of the content of a text. It allows better understanding with the text through emotional response.

6. *Synthesizing*: a method of marrying multiple ideas from various texts in order to draw conclusions and make comparisons across different texts.

7. *Making connections*: it is a cognitive approach also known as 'reading beyond the lines' which involves finding personal connection to reading such as personal experience, previously read text to help establish a deeper understanding of the context of the text and thinking about the implications that have no immediate connection with the theme of the text.

For readers to improve their reading comprehension, some cognitive skills are needed. They are:

Fluency

Presley (2002) defines fluency as "a prerequisite skill to comprehension". The automatic recognition of words that frees up the cognitive capacity required for comprehending the meaning of the words. It is the ability to quickly and accurately read a text with expression. It is important because it provides a bridge between decoding and comprehension (Pikulski& Chard, 2005).

Vocabulary and Semantic Processing

Vocabulary and semantic processing are cognitive skills needed for reading comprehension. A sense of semantics is needed to decode meaning from a text. Semantic processing is the processing that occurs after we hear a word and encode its meaning. Semantic processing produces lasting

memory traces unlike those produced by shallow processing which is fragile memory traces that decay rapidly.

Vocabulary skills such as oral definitions and word retrieval, are the vest predictions of reading comprehension development (Roth, Speece, & Cooper, 2002). The National Reading Panel (2000), concluded that vocabulary instruction facilitates the development of reading comprehension, especially when students are repeatedly exposed to vocabulary words. Vocabulary skills when developed makes text familiar and easy to read and comprehended (Pelumi, 2018).

Visualizing

The active construction of a mental image of a text is visualization and it is a key component of reading comprehension. These mental images are fluid and changes as the reader continually assimilated new text (Woolley, 2010). Visualization aids comprehension because when a mental representation is created, it makes the text looks real). The National Reading Panel (2000), suggests that these skills contribute to comprehension.

Working Memory

Working memory is also an integral part of reading comprehension. Sagheurie, Ehrlich, Oak, and Yuill (2000), in their work found working memory to be a direct predicator of reading comprehension scores among third and fourth graders, although not significant for first and second graders. Working memory is defined as an executive function responsible for keeping and updating information in this mind (Roebers, 2013). It is also responsible for managing the process of extracting information from text and integrating it with prior knowledge to create meaning, working memory plays a critical role I'm reading comprehension across age groups.

Reasoning and Inferences

Reasoning and inference is the ability to use the text to identify and determine additional information not stated in the text. The readers' ability to infer, aid comprehension. Cain and Oakhill (1999, 2007) reported that students' inference skills contribute to future comprehension skills. The process of inferential reading requires both short-term and long-term memory, acting on retrieval of background knowledge combined with the text to arrive at the implicit information from the text (NFER, 2008).

Prediction, activating prior knowledge, questioning, visualizing, monitoring, clarifying and drawing inferences are strategies that make reading comprehension a successful one according to the National Reading Panel. Reading comprehension is affected by the readers' knowledge of the topic, knowledge of the language structure, knowledge of text structure and genre, reasoning abilities, motivation, level of engagement, and the quality of the reading materials (Ofuani, 2017).

Reading comprehension failure is caused by certain factors among which are:

- Inadequate instruction

- Insufficient exposure and practice

- Deficient word recognition skills

- Deficient memory capacity and functioning

- Significant language deficiency, and

- Underdeveloped language.

Types of Reading Comprehension

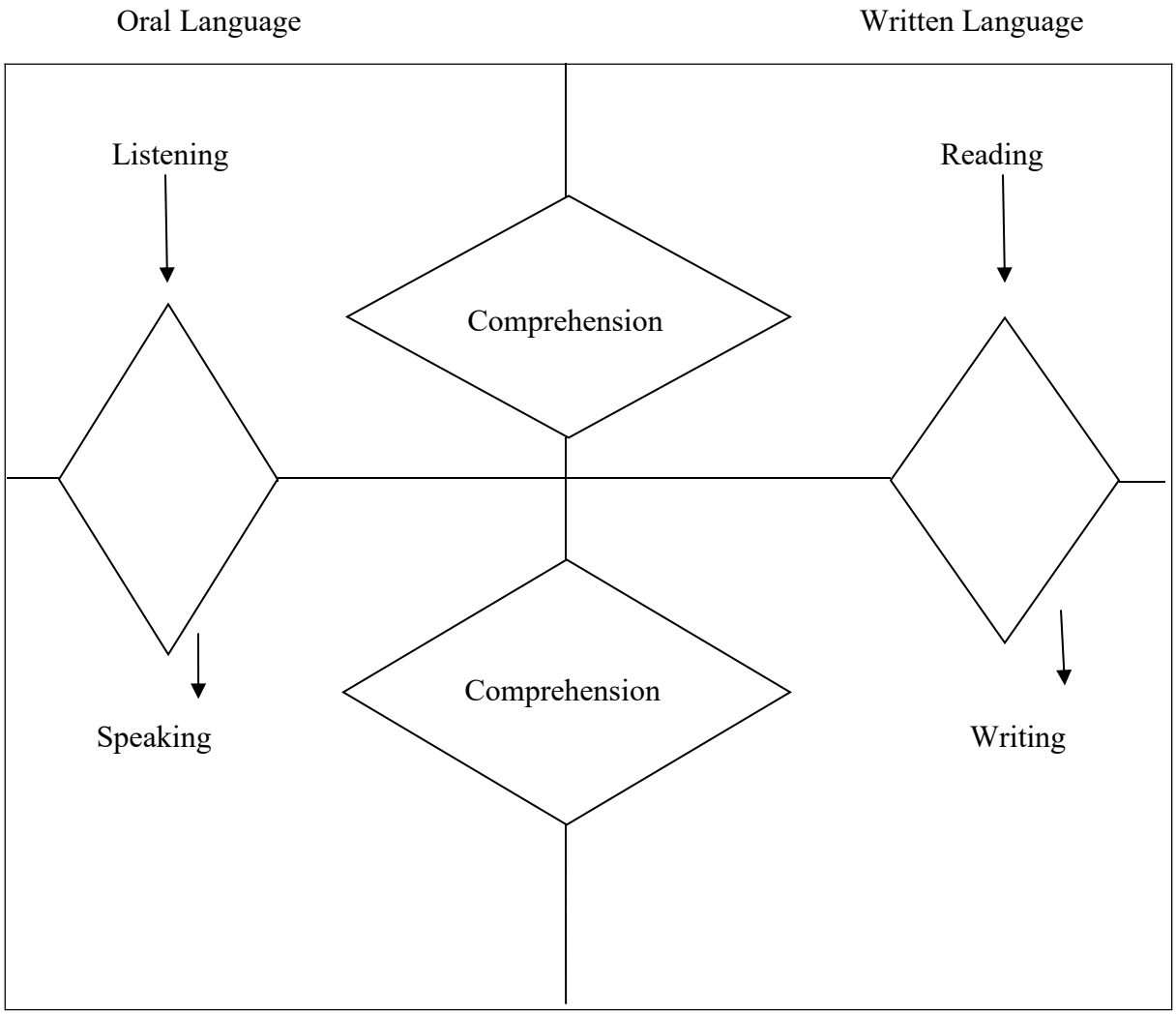
Arua (2009) identifies three (3) types of reading comprehension. They are:

1. Literal comprehension: It is a process of reading a material just for facts. It is the easiest of the three types of reading comprehension.

2. Inferential comprehension: This is a type of reading comprehension that deals with reading between the lines. The facts are not directly stated but the reader reads to get the writers intended meaning.

3. Critical comprehension: This involves evaluation and appreciation of a text and this requires a thorough understanding of the material read making it a complex type of reading comprehension.

English language teaching and learning is based on the four language or communication skills which are listening, speaking, reading and writing. These skills are complementary and interrelated. The relationship between them is graphically illustrated with an interaction model as shown in fig 1 below.



Source: Fisher and Terry (1995).

Figure 1: Relationship among the language skills.

Factors Affecting Reading Comprehension

Readers are faced with some reading comprehension problems or difficulties which can be traced to some factors. Wallace (1992) stated that there are three (3) factors affecting reading comprehension. They are: teacher related factor; reader related factor; and text related factor.

Other factors influencing reading comprehension according to Chaos (2005) are:

Fluency: what allow students to retain information with accuracy, expression and increased speed is fluency. Through reading practice, the ability to read fluently is developed. Students spend less time to decipher the meaning of words and more time considering the overall meaning of the text when they are fluent. The ability to easily understand a text and insightfully respond to it is developed through fluent reading.

Vocabulary: The mastering of the vocabulary skills affects reading comprehension. The familiarity of words of same classes with a new text will aid the comprehension of the text. Vocabulary knowledge or knowledge of word meanings and functions play a vital role in reading comprehension. Abidin, (2008) claims that "to comprehend the printed text, the reader must distinguish the meaning of most of the words they encounter". Mastering vocabulary includes recognizing a word's part of speech, definition, useful context clues, and how it functions in a sentence. Chao (2005) states that there is a significant correlation between vocabulary and reading comprehension abilities; that the vocabulary knowledge and background knowledge can help students read and comprehend better. The more vocabulary students know, the better they can decode and understand what they read.

Critical thinking; when students possess critical thinking skills, they can actively, respond to a text more efficiently. They will be able to determine the main ideas, supporting details, the sequence of events and the overall structure and organization of the text. Having critical thinking affects reading comprehension positively.

Syntactic and Semantic knowledge: a high level of lexical knowledge will bring good reading comprehension. Chao (2005) states that vocabulary ore syntactic knowledge is a significant

predictor of reading comprehension ability. Syntactic knowledge helps a student to deal with the sequence of reading comprehension passage that consist cohesive devices. Wu, (2006) believes that syntactic knowledge is significant for two reasons. First, one can use a word or express the meaning of a sentence plainly with the aid of grammatical structures and rule of syntax. Second, analyzing the syntactic structure of a sentence can be useful to identify and recognize words.

Background knowledge: Background knowledge plays an importance role in comprehension. While reading a text, learners rely on their prior knowledge in the understanding of the new text. Johnson, (1984) and Brown, (2000) noted that background knowledge is the "information, knowledge, emotion, experience and culture" that readers bring to the printed word. So, background knowledge is considered as an important and essential factor in comprehending a text. If students have enough prior knowledge to bring to mind, the understanding of the new concept will be facilitated. If students lack enough schemas, the new concept will seem difficult and the students will not be able to activate this knowledge thereby struggling with the new information. Hudson (1982) stated the importance of background knowledge in the interpretation of texts by showing that schemata can overside language proficiency as a factor in comprehension. Background knowledge is a bridge connecting input and output. Chou, (2011) found out that background knowledge are useful especially when texts are coherent enough to "allow the reader to see the connections between the text and the precious knowledge so that the knowledge can be combined with the new information to create a meaningful representation.

Methods Of Teaching Reading Comprehension

Adler (2004) identifies seven (7) strategies to teach reading comprehension.

1. Monitoring comprehension: this is teaching students to monitor their comprehension I.e. to know when they understand what they read and when they do not. To also know how to fix problems in their understanding as the problems arise.

2. *Metacognition*: it is defined as "thinking about your thinking". Good readers use metacognitive strategies to think about and have control over their reading. Before reading, they might clarify their purpose of reading and preview the text. During reading, they might monitor their understanding; adjust their reading speed to fit the difficulty of the text and fixing any comprehension problems they have. After reading, they check their understanding of what they read.

3. *Advance organizers*: Advance organizers are usually presented in form of visual or graphic organizers. Advance organizers illustrate concepts and relationship between concepts in a text using diagrams. It helps students focus on the concepts and how they are related to other concepts. Examples are story map, story board, cause and effect, KWL charts etc.

4. *Answering Questions*: questions are effective because they give students a purpose for reading and focus their attention on what they are to learn. It also helps them to think actively as they read; it encourages them to monitor their comprehension.

5. *Generating Questions*: by generating questions, students become aware of whether they can answer the questions and if they understand what they are reading. It helps students to learn how to ask questions that require them to combine information from different segments of the text.

6. *Recognizing story structure*: in story structure instruction, students learn to identify the categories of content (characters, setting, events, problems, resolution) often; students learn to recognize story structure through the use of story maps. Instruction in story structure improved students' comprehension.

7. *Summarizing*: summarizing requires students to determine what is important in what they are reading and put it in their own words. Instruction in summarizing helps students to: identify the main ideas, connect the main or central ideas, eliminate unnecessary information, and to remember what they read.

Owolabi (2012) carried out a study on some helpful hints for the successful teaching of reading comprehension in English as a Second Language (ESL) classroom. He stated that the performance of ESL students in English language public examinations may not be unconnected from the lack of proper comprehension of what is read. More specifically, performance in the comprehension section in public examinations such as the Senior School Certificate Examination in Nigeria is appalling. Also, students' performance in the West Africa Examination Council's conducted examinations confirm this fact and also points to the reality that the stereotyped method of teaching the language is no longer effective. According to him, the method failed to produce expected result. The study made some efforts to look at the possibilities of methods that have not been fully explored up till now. He noted that there are gradual stages in the teaching of reading comprehension, right from junior secondary school to senior secondary school in a six-year post-primary education system and considered the place of motivation in an ESL comprehension lesson and the teaching of different types of question that are often tested in the public examinations.

Adekola (2014) investigated whether collaborative learning method is effective in enhancing students' academic achievement in reading at the senior secondary school level. The study employed a quasi-experimental research design. Senior secondary school students in the South Western States in Nigeria were the target group. 600 samples were drawn from 4 Geo-political zones in Ogun state, Nigeria using the purposive sampling techniques for the selection from five schools from each zone. 496 students comprising 272 male and 224 females completed the

questionnaires and returned. The result of the data analysis presented in the study showed that both male and female are experiencing high level of collaborative learning comprehension. However, it is confirmed that there is no significant difference in the level of achievement of those exposed to collaborative learning and those exposed to the conventional method of teaching. Male low achievers performed better than female counterparts when exposed to collaborative learning in reading comprehension. It is therefore encouraged that students should learn collaboratively instead of individual as it is the common trend at all levels of education system in Nigeria.

Kolawole and Jire-Alao (2014) carried out a survey on English as Second Language (ESL) teachers in improving the teaching of reading comprehension skills. The result of the survey revealed that comprehension teachers adopted three methods naming, teaching, testing and teaching/testing in their effort at promoting the acquisition of reading comprehension skills by students. Unfortunately, it was clearly observed that the strategy of testing students instead of teaching them those skills first, before they are asked to apply the skills in answering questions on selected passages has been a major problem for students. Based on the findings therefore, the researchers concluded that the strategies used by the teachers are not appropriate.

Advance Organizers In Teaching

The term 'advance organizer' was coined by Ausubel (1959) who believed that the most important determinant of learning is what the learner already knows or brings to the task. It is a cognitive instructional strategy. Ausubel (1968) first introduced the concept in his assimilation theory of meaningful learning and retention. His early experiments provided the most-cited research supporting the effectiveness of Advance Organizers with increasing achievement (Ausubel, 1960;

Ausubel& Fitzgerald, 1961, 1962; Ausubel& Youssef, 1963). Ausubel (1960:81), said "these organizers are introduced in advance to learning itself, and are presented at higher level of abstraction, generality, and inclusiveness; and since , the substantive content of a given organizer or series of organizers is selected on the basis of its suitability for explaining, integrating, and interrelating the material they precede, thus strategy simultaneously satisfies the substantive as well as the programming criteria for enhancing the organization strength of cognitive structure".

Advance organizers help students' access relevant knowledge efficiently. Information presented prior to learning which learners can use to interpret new incoming information is known as advance organizers (Mayer, 2003). Advance organizers are cognitive strategies that help to make complex concepts or task clear, and also to relate known information to new or unknown information. They may be designed to facilitate orientation to new information, sequential organization through a task, elaboration of a concept, thematic or dramatic organization of narrative, discourse, or other forms of cognitive organization. They do not only facilitate understanding of new information and completion of complex tasks, they also improve learning and help in the levels of encoding new information, storing it and subsequently retrieving it".

According to Ausubel (2000), an advance organizer is relevant introductory materials presented in advance. The organizers help students learn at a higher level of abstraction, generality and inclusiveness than the learning task itself. Operationally, Ausubel (2000) notes the differences between advance organizers, summaries and overviews. Advance organizers are more abstract, inclusive and general than the more detailed learning materials they precede, and are relatable to existing relevant ideas already present in cognitive structure. Summaries and overviews, on the other hand, largely accomplish their effect by repetition and simplification.

In the 1990s and 2000s, Advance Organizers still remained an actively debated topic. Research on the traditional Advance Organizers drastically decreased in number possibly due to the non-statistical-significance of the research results. However, many researchers began to conduct studies on Advance Organizers in a variety of formats, such as visual Advance Organizers (DaRos&Onwuegbuzie, 1999; Herron, Hanley, & Cole, 1995; Hirumi& Bowers, 1991; Millet, 2000) and multimedia Advance Organizers (Calandra, Lang, & Barron, 2002; Hale, 2003; Minchin Jr., 2004; Tseng, Wang, Lin, & Hung, 2002; Yeh& Lehman, 2001). Consistent with the historical findings, recent research again failed to generate statistically significant results on effectiveness of Advance Organizers on posttest scores between treatment groups and control groups, though most researchers continued to suggest a mild but positive effect of Advance Organizers on learning and retention. The statistical non-significance of the research might be attributed to imprecise construction of organizers, short duration of treatment, inadequate research control, and insufficient instruction on how to use organizers (Kenny, 1993; Luiten et al., 1980; Mayer, 1979b)

Ausubel's early experiments provided the most-cited research supporting the effectiveness of advance organizers. Ausubel (1960) and his associates conducted five studies on expository and comparative advance organizers in a Midwestern State University and a high school in Campaign, Illinois, from 1960 to 1963. All of the five studies reported statistically significant main effects for the organizer treatment group in the posttests, especially in the long-term retention posttest which was conducted 10 days after the treatment (Ausubel, 1960; Ausubel& Fitzgerald, 1961, 1962; Ausubel& Youssef, 1963; Fitzgerald &Ausubel, 1963). Based on the experiments, Ausubel prescribed a model for predicting the effectiveness of advance organizers (Ausubel, 1968, 2000; Stone, 1983):

1. Students given advance organizers should perform better on tests on the material-to-be-learned than students in control groups.

2. The advance organizers' effect should be at least as great in longer studies as in shorter ones.

3. Abstract advance organizers should be more effective than those including concrete materials or analogies.

4. Subsuming advance organizers should be more effective than others.

5. The learning of students at the formal-operational level should be enhanced more than that of concrete-operational students.

6. Advance organizers bridging the gap from previous knowledge should be more effective than overviews or summaries of the material-to-be-learned.

7. Students having either low verbal or analytic ability or low prior knowledge of the material should be helped more by advance organizers than other students.

A detailed analysis of Ausubel's studies, however, revealed a number of problems. It is claimed (McEneany, 1990) that no consistent evidence was found across the studies in support of advance organizers or for predicted interactions with verbal ability. In addition, Ausubel's definition of an advance organizer was called into question, and a sound operational definition was negotiated. Later studies in the 70s and 80s failed to show a consistent positive facilitative effect on advance organizers. A number of findings conflicted with Ausubel's model. In some cases, students given advance organizers before instruction did no better, or did even worse, than students in control groups.

Since research on advance organizers had generated equivocal findings since the 1970s, some researchers criticized that Ausubel's definition for advance organizers was vague. Based on the results of the nine experiments carried out by Mayer (1979), he made suggestions on the procedures

and operationally defined steps for generating advance organizers. He interpreted advance organizers as "information that is presented prior to learning and that can be used by the learner to organize and interpret new incoming information" (Mayer, 2003). To facilitate learning and retention, Mayer (1979) suggests that advance organizers should:

1. Be composed of a short set of verbal or visual information;
2. Be presented prior to learning;
3. Contain no specific content from the preceding learning task;
4. Generate the logical relationships among the elements in the preceding learning task; and
5. Influence the learners' encoding process.

The use of advance organizers is one of the evidence-based pedagogical strategies to promote meaningful learning in traditional classrooms. An advance organizer is defined as relevant introductory materials presented in advance of a lesson of higher abstraction, generality and inclusiveness than the learning tasks itself (Ausubel, 2000). This learning strategy has been proven to be an effective learning strategy to activate existing knowledge and to provide information to incorporate details of new lessons in traditional classroom environments (Ausubel, 1968; Hirumi& Bowers, 1991; Kenny, 1992; Luiten, Ames, & Ackerson, 1980; Mayer, 1979b; Stone, 1983). Among the different formats of advance organizers, the concept map, a visual advance organizer, has been widely used in classrooms and noted with positive effects on learning (Gil-Garcia & Villegas, 2003; Kang, 2002; Millet, 2000).

Recent studies conducted on the use of advance organizers, including both text advance organizers and concept maps in computer-based classes, reveal a mild but positive effect on learning and retention (Calandra, 2002; McManus, 2000; Tseng, Wang, Lin, & Hung, 2002; Yeh& Lehman, 2001). Although many of the researchers claim that their studies tested the use of advance

organizers in online learning, all identified research studies took place in physical computer-equipped face-to-face classrooms or labs where students and teachers were both present during a limited duration of time. None of the study was conducted in a fully Web-based environment where the instructor was physically and geographically separated from the learners.

Types of Advance Organizers

Today, advance organizers are widely used in classroom teaching. They are technically a pre-reading guide that clarifies concepts, sets up expectations, or builds background in any format of text, graphics, or hypermedia (Leu&Kinzer, 2003).

There are two main types of advance organizers according to Feeney (2008).

1. An advance organizer can be an introduction to a new topic with the goals of giving students an overview, connecting new information to what the students already know and illustrating the organization of the new concept or information to be processed and learned.

2. An advance organizer can be a task planner designed to orient the learners to a text by providing organizational cues, like a sequence of steps to complete the task or a list of components of the task or by showing what a product (i.e. the reading outcome) should look like (e.g. what a well-organized story or description look like).

Advance organizers according to Ausubel (2000), may be presented in form of text advanced organizers or graphic advanced organizers. Text advance organizers are either expository or comparative. According to Ausubel (2000), an expository organizer needs to be used on relatively unfamiliar materials to provide relevant proximate subsumers, while a comparative organizer is used for relatively familiar learning materials to integrate as well as discriminate between new ideas

and existing ideas. Graphic organizers refer to "visual and verbal organizational structures that assist the reader in organizing what may seem to be unrelated details and concepts" (Horton &Lovitt, 1989, p.627). The function of a graphic organizer is to serve as a nonverbal, visual-spatial referent that reflects or generates underlying principles and important ideas of the material-to-be-learned and the inter-relationships of ideas and their logical connections to higher, equal, or lower order pieces of information (Horton &Lovitt, 1989; Kang, 2002).

The graphic advanced organizer serves as a nonverbal, visual-spatial referent that reflects or generates underlying principles and important ideas of the material-to-be-learned and the inter-relationships of ideas and their logical connections to higher, equal, or lower order pieces of information (Horton &Lovitt, 1989; Kang, 2002). Unlike text-based advance organizers, there are published procedures for constructing graphic organizers. Specifically, the effectiveness of graphic advanced organizers might vary due to the experimenters' design and construction. In the future, an operational definition and procedures for constructing graphic advanced organizers need to be established.

There are many advance organizer possibilities. Examples of popular adance organizers include K-W-L organizers, Semantic Maps, Mind Maps, Step-By-Step Charts, Series of Events Chains, Sequence Organizers, Cause and Effect Chains, and Timelines (Minchin Jr., 2004). With the advancement of technologies, teachers and designers started to use hypermedia programs, including digital video, PowerPoint presentation, and Flash animations to construct advance organizers (Tseng et al., 2002).

Importance of Advance Organizers

There are three basic importances of advance organizers. They are;

1. They direct students' attention to what is important in the upcoming lesson.
2. They remind students of relevant information they already have
3. They highlight the relationship among ideas that will be presented.

Other importance of advance organizers are: by using advance organizers to link the new information to the old ones, the new information can be remembered easily; they encourage and motivates students as it makes them more confident about the materials to come; they also help the teacher fit the new information into a larger framework or existing schema; They help students understand the governing questions, issues and propositions that are reflected in that hierarchy.

Advance organizers provide structures for student thinking. They act as conceptual bridges from the old information to the new information. If students understand the basic outline of the structure, they will be able to fill in the gaps with new and related information as presented to them.

Extensive research was conducted on the effectiveness of using Advance Organizers in classroom teaching from the 1960s to the 1990s. The research evidence concerning any facilitative effect of Advance Organizers upon learning and retention is variable, but positive in general. Although Ausubel's early experiments supported the effectiveness of Advance Organizers with significant increasing learning achievement (Ausubel, 1960; Ausubel& Fitzgerald, 1961, 1962; Ausubel& Youssef, 1963), later studies failed to show a consistent positive facilitative effect (Barnes & Clawson, 1975; Luiten, Ames, & Ackerson, 1980; Mayer, 1979b; Stone, 1983). The discrepancies regarding the effectiveness of Advance Organizers might result from inadequate construction of Advance Organizers or weak research procedures or control (Kenny, 1993; Luiten et al., 1980; Mayer, 1979).

Praveen and Rajan (2013) conducted a research on using Graphic Organizers to improve reading comprehension skills for the middle school ESL Students. The focus of the article was on ESL middle school language learners' use of these graphics as information organizers while comprehending a passage for main ideas, supporting details, facts, opinions, comparisons and contradictions. The study was carried out at a school in the western part of Tamil Nadu, India. The experimental and control groups of the research were middle school students in ESL classes and the experiment lasted for two weeks. The number of students in the classes was thirty five each. The average pretest score for the group A is 38% while the same group got an average % of 39.2 during the posttest. This proves there is no significant improvement in the controlled group. But the case was different with the Experimental group. This group got an average % of 39.43 in the pretest and 56.23% in the post test, which means the group has improved significantly. The improvement is +17%. This shows the group has improved more than 10% which is significant. The result of the posttest suggested that the experimental group students have improved in all the five types of reading questions compared to controlled group students. Therefore, using graphic organizers is effective in reading questions like; identifying the main idea, finding the supporting details, dealing with vocabulary, fact and opinion, & making inferences.

Baiyun Chen (2007), carried out a study on the effect of advance organizers on learning and retention from a fully web based class. He made use of concept map as a visual organizer and outline as a text organizer. The population encompassed 164 undergraduate students enrolled in a fully web-based class. The majority of the students were between the age of 21-23 in either their junior or senior year. This study lasted for six weeks. Statistics procedures, including descriptive analysis, one-way analysis of variance (ANOVA), and repeated-measure regression were used to analyze the data collected. This research shows that instructional strategies, like advance organizers,

can be incorporated into online learning experience because it was found to be a solution to learning challenges in an interactive multimedia environment.

Mayer (1979) also reviewed advance organizer literature using 27 published studies conducted by other researchers in the 1960s and 1970s containing an advance organizer group and a control group. He divided the studies into three categories based on three criteria: is the material unfamiliar, technical or lacking a basic assimilative context? Is the advance organizer likely to serve as an assimilative context? Does the advance organizer group perform better than the control group on a test? Only three out of the 27 studies claimed statistical significance. However, considering the overall positive but insignificant treatment effects, Mayer concluded that there was a small but consistent advantage for the advance organizer group on tests of learning and retention. He found that advance organizers had a stronger positive effect if learners lacked prerequisite skills or knowledge, if the learning material was poorly organized, or if generalized outcomes were measured.

Simmons (1988) investigated how the use of graphic organizers reflected a passage's hierarchy of information as organized through topic sentences, supporting details, etc. and found that students had no problem in identifying the main idea of a passage and the supporting details and their organization in each paragraph. This helped the students in understanding the passage as a whole, and they could also understand the structure of each paragraph. According to the study, English as Foreign Language (EFL) students who were trained in using graphic organizer performed better in the post test compared to the students who did not use graphic organizers.

Williams et al. (2005) studied that incorporation of graphic organizer in the comprehension of expository reading texts. This study investigated the effectiveness of an instructional program designed to teach 2nd graders how to comprehend compare-contrast expository text. Along with

introducing new content (animal classification), the program emphasized text structure using a graphic organizer, and through the close analysis of specially constructed exercise paragraphs. Students were able to demonstrate transfer to uninstructed compare-contrast texts though not to text structures other than compare-contrast. Moreover, the text structure instruction did not detract them from their ability to learn new content. The results provide evidences that explicit instruction in comprehension is feasible and effective as early as the 2nd grade.

Bulgren and Schumaker (2006) described 19 studies of advance organizers, all with adolescent participants (5 participants with only learning disabilities, 14 participants with learning disabilities, low academic achievement, and normal achievement). All of the organizers used in the studies had been developed at the Kansas University Center for Research on Learning. The 19 studies reported uniformly positive results, interpreted both statistically and clinically, leading the authors to conclude that advance organizers (graphic advanced organizers), can substantially improve the learning of adolescent students with learning disabilities, low achieving students, and average achieving students.

Nesbit and Adesope (2006) carried out an experimental research on the application of advance organizers. They estimated that more than 500 articles have been published in peer-review journals, most since 1997, with substantial reference to educational applications of advance organizers. In their meta-analysis of 55 experimental studies (with 5,818 participants and 67 standardized mean difference effect sizes), Nesbit and Adesope concluded that there is a generally positive effect of graphic organizers (i.e., knowledge and concept maps) in facilitating knowledge comprehension and retention, with effect sizes varying from small to large depending on how the organizers were used and on the type of comparison treatment. The students who were studied ranged from grade 4 to post-secondary education. Most of the studies were of regular education students (including post-

secondary professional education). However, Nesbit and Adesope also summarized data suggesting that low ability students experienced greater benefit than high ability students, suggesting a relatively stronger positive effect for students with cognitive disability.

Luiten, Ames, and Ackerson (Luiten et al., 1980) examined 135 studies that showed the effects of advance organizers on classroom learning and retention. They found advance organizers to have a positive measurable effect on immediate learning (posttest within 24 hours of the treatment) and long-term knowledge retention (posttest 24 hours and after). The mean effect size for the advance organizer on learning was 0.21, indicating that the average participant performed better than 58% of the control group individuals. One of the most interesting findings from this meta-analysis is that the retention data showed the advance organizer effect increased with time. The mean effect size on retention 24 hours and after was 0.26 and that of 22 days and longer was 0.38, considerably higher than effect size on immediate learning at 0.21.

Minchin Jr. (2004) also conducted a participatory action research, using document analysis, survey and focus group strategies, to investigate the facilitative effect of graphic organizers in introductory information technology classes as part of his dissertation. The findings of the study support the use of graphic and advance organizers in the classroom with positive feedback from both students and instructors. The results indicate that using graphic organizers is helpful for increasing learners' understanding, especially for handicap and at risk students in the class, and this educational strategy also shifts the more traditional approach of instruction to a more student-centered approach. In the above qualitative studies, the population consists of college students in both cases and the sample size is comparatively smaller than the quantitative counterparts. These studies carry out a case study design, using observations, interviews, survey and focus group as data collecting strategies. For data analysis, they follow the Interpretative approach (Erickson, 1986) or the Grounded theory

(Charmaz, 2000), analytically inducting themes or theories from narratives and quotes of participants. The advantages of such qualitative design are that they provide a greater information base and engaged wide range of audiences in data gathering andfindings. However, compared to the quantitative methodology, the most serious limitation is the lack of generalizability to larger population due to the subjectivity of the findings.

Xiangying Jiang and William Grabe, (2007) have researched a number of generic forms of graphic representations such as definitions, compare and contrast, cause and effect, process and sequence, etc that apply to regularly recurring text structures. Outcomes of this review included a focus on graphic organizers that more closely reflect the discourse organization of the text, leading to more consistent representation of major text structures.

Gender and Reading

For a long time, the gender gap in reading has existed and has a traceable trend over the past several decades. The analysis of the Brown Center Report on American education (2015) extends beyond the United States and it shows that boys' reading achievement lag behind that of girls in every country. Generally in learning, gender gap is discovered to be as a result of the biological difference in the organization of the female and male and is known as cerebral asymmetry (Buffery&Gray, 1972). The cerebral asymmetry is the functional disequilibrium between the two brain hemisphere. The hemispheres are formed to perform different functions even if they are almost of same size. Males' brain are more asymmetrically lateralized than that of females and the left hemisphere dominance for language occurs earlier and more completely in females' brain than males. This explains why female are superior in verbal skills and male are superior in spatial skills. Stereotypes have emerged that boys are better at math and science while girls are better at reading and language. This is supported by Maccoby&Jacklin (1974).

The National Centre for Education Statistics (2004) provided analysis of gender difference in reading achievement for the 1992-2003 administration of the National assessment of Educational Progress (NAEP). It was revealed that girls outscored boys at every grade level and age examined. Also, females in theses grade also performed better than their male counterparts in writing achievement in 1998 and 2002 (Freeman, 2004). The LEA reading literacy data provides possibilities to investigate gender differences across countries in such tasks in two age groups, 9 year olds and 14 year olds. The general question about cultural influences versus an invariant pattern of gender differences is a great interest for gender research. They found out that a consistent female advantage over male was found among 9 year olds but inconsistent in 14 year olds. One of the earliest studies on gender differences in reading was conducted in Lowa in 1942 and the result is that girls performed better than boys at reading comprehension.

There are three most prominent explanations why females perform better than males according to Brown Center Report (BCR) 2015. They are; Biological/ Developmental; school practices; and cultural influences. Erinso (1994) also identified three major factors why males perform better than females In science and technology. They are biological, social, and psychological. Boxene (1995) and Sadler-Smith (1999) assert that learning style probably differ by gender. Research results however vary and the following conclusions have been drawn; men are abstract learners while women have more anxiety about success, men are more intuitive, women are more analytical and organized while men are undirect.

Gruthrie and Greaney (1991) found out that girls tend to report enjoying reading more than boys and sometimes being more motivated to read. In the United States, PISA 2012 reports the gap between males to females to be 23 to 62 points and the male points increased when the males are motivated to read. One of their suggestions therefore is to make efforts to boost their enjoyment of

reading. The German did the best job in raising boys' enjoyment of reading, French males PISA score declined while Ireland also managed to get boys to enjoy reading.

Connell and Grunzelmann (2004) see gender and reading achievement debate as a complex problem influenced by many factors such as societal expectations, stereotypes and commonly held myth about gender. It is assumed that girls read more and learn to read sooner than boys. Girls tend to be more adept at retrieving information and literacy tasks that are work related. Girls also attitudinally, have higher estimates of their reading activities than boys, girls value reading activities more than boys and are more interested in leisure than boys. Girls are less likely to declare themselves as non-readers than boys; they are also more likely to express enthusiasm for reading than boys.

Hamilton (1999) found that consistently, boy scored higher than girls on questions containing visual or partial content and on questions that required knowledge learned outside school. In verbal fluency, perception, speed, and manual dexterity, female are more competent while males are better in numerical aptitude, science reasoning and spatial relationship. Boys are ahead of girls in manipulative and physical productive tasks (Ogunkola 1998).

The gender gap is larger for middle and high school students than for students in elementary school. It exists across the globe, in countries with different educational systems, different popular cultures, different child rearing practices, and different conceptions of gender roles. Regardless of the origins of the differences, Akabogu (2006), found out that both male and female secondary school students can achieve equally in reading comprehension if given the same learning opportunities. So, the duty of the teacher is to study the innate characteristics of the both the male and female students with regards to reading and give them equal learning opportunities and motivations.

Summary of Literature Review

The right and required attention has not been given to reading comprehension over the years. Teachers have not helped matters because reading comprehension has been neglected resulting into the problems faced by students in this area. A lot of researches have been carried out with recommendations which did not change anything because the recommendations are not followed or properly followed. In this study, reading comprehension strategies as proposed by some experts (Owolabi 2012, Pressley 2002, Kolawole&Jire-Alao 2014) were reviewed and in the end it is proved that reading comprehension can be effectively taught with expected results in secondary schools if the proposed recommendations are properly followed and handled.

The review of literature revealed that the use of other reading comprehension strategies other than the conventional approach will make the teaching and learning of reading comprehension effective. It revealed that the use of advance organizers can help teachers facilitate an effective reading comprehension teaching. In general, use of advance organizers has been an actively debated topic since the 1960s until recent years. Based on the aforementioned reviews, the research evidence concerning any facilitative effect of advance organizers in teaching is variable, but positive in general.

Most studies examine the effects of graphic organizers or compared the effects of graphic organizers with those of the textual organizers. Five out of the nine selected studies illustrate a statistical significance, and the effect sizes are considered medium, based on the Cohen convention, with an average of 0.26. Again, research evidence failed to generate overpoweringly statistically significant results on effectiveness of advance organizers on posttest scores between the treatment group and the control group, though most researchers continue to suggest a mild but positive effect of advance organizers on learning and retention.

This present study recognizes the importance of teachers as a factor that can affect the students' performances in reading comprehension in secondary school. So it is therefore interested in how teachers can be helped in the use of effective strategies to facilitate effecting teaching of reading comprehension. The use of advanced organizers is introduced and the study is interested in its effects on students' academic achievement in reading comprehension.

Most of the studies reviewed, revealed the effectiveness of advance organizers in other fields and areas but not much work has been done on the effective use of advance organizers in teaching English language especially in the aspect of reading comprehension. The few studies seen, made use of graphic organizers, skimming etc. but not much work has been done on the effective use of KWL (what you **k**now, what you **w**ant to know and what you **l**earnt) chart and concept map. Most of the studies reviewed also made use of fully web class, post- secondary school students and students with learning disabilities which show that not much work has been carried out on secondary school students and how these Advance organizers can be effectively used to improve junior secondary school students' reading comprehension achievement. Lastly, the literature reviewed, revealed that not much work has been done in this 21st century.

CHAPTER THREE

METHODOLOGY

This chapter discusses the methodology applied in collecting, analyzing and interpreting the research data needed to achieve the aim of the study which is to investigate the effect of advance organizers on secondary school students' performances in reading comprehension. The following aspects will be discussed:

- Research design
- Population of the study
- Sample and sampling techniques
- Research instrument
- Validity of the instrument
- Reliability of the instrument
- Method of data collection
- Method of data analysis.

Research Design

The quasi-experimental research design was adopted for this study and made use of pretest and posttest as well as experimental and control groups. Both the experimental and the control groups were pretested, after which they were exposed to treatment (the experimental group was taught reading comprehension using advance organizers while the control group was taught using the conventional way of teaching reading comprehension which is the basal method). The groups were then posttested at the end of the treatment. The independent variable is the use of advance

organizers (KWL chart and concept map) while the dependent variable is the students' achievement in reading comprehension.

Table 1 Diagrammatic Presentation of the Research Design for this Study

Groups	Pretest	Treatment	Postest
Group1 (experimental)	01	X1	02
Group2 (control)	03	X0	04

The schematized diagram for the design is represented symbolically as

01 X_1 02

03 X_0 04

Where 01 represent the pretest and 02 represent the posttest for group one, X_1 is the unusual treatment (experimental group), X_0 is the usual treatment (control group). While 03 and 04 represent pretest and posttest for group two respectively.

Population of the Study

The population of the study is all Junior Secondary School two (2) students in Ifako-Ijaiye Local Government, Lagos. There are 11 public secondary schools with the total number of 5396 Junior Secondary School 2 students in the Local Government Area. Only 2 public secondary schools were used. The table below shows the public schools and the number of students in J. S. S 2 in the Local Government.

S/N	Name of Schools	Number of students in J.S.S 2
1.	Akinyele Alakuko Com. Junior	511
2.	Estate Junior High School	178
3.	Fagba Junior Grammar School	425
4.	Ijaiye Housing Estate Junior	856
5.	Ijaiye Ojokoro Junior College	497
6.	Ijaiye Ojokoro Junior High	567
7.	Iju Junior Grammar School	682
8.	Iju Obawole Junior Grammar School	515
9.	Stadium Junior Grammar School	355
10.	Station Junior Grammar School	406
11.	Vetland Junior Grammar School	404

Ifako-Ijaiye Zone of the Education District 1

Sample and Sampling Techniques

The sample size for this study is Public Junior Secondary School two (2) students in two (2) sampled schools in Ifako-Ijaiye Local Government Area of Lagos State. In selecting the sample, the schools were stratified according to school type (all-boys, all-girls and mixed schools) first, and then two schools were randomly selected from the mixed schools and were labeled school I & II. From the two schools selected, two classes were randomly selected and were labeled A & B. Class A was the control group while class B was the experimental group.

Table 2 Selected Schools and Sample of Students

S/N	School	Number of Classes	Number of Students
1	School 1	1	**33**
2	School 2	1	**69**
	Total	2	**102**

Research Instrument

The research instruments that was used for this study was titled Reading Comprehension Achievement Test One (RCAT 1) and Reading Comprehension Achievement Test Two (RCAT 2). RCAT 1 was the pretest while the RCAT 2 was the posttest. The pretest established the students' comprehension ability while the posttest measured the effectiveness of the treatment in terms of possible increase in scores. Both instruments were made up of two sections. Section A consisted of demographic information such as name of school, serial number, and students' gender. Section B consisted of two comprehension passages having fifteen multiple choice questions. The data gathered from the two tests were used to determine the achievement of the students.

Instructional Package

Two different types of instructional packages were prepared for teaching the selected content of this study. The instructional packages for the two groups reflect the use of advance organizers and the conventional method of teaching reading comprehension. Each lesson plan consisted the target comprehension skills and are similar.

In carrying out the treatment, both groups- experimental and control groups were exposed to six weeks course on the identified passages. The course consisted of six (6) lessons approximately 35 minutes each.

Procedure for Treatment

Reading comprehension was taught for a period of six weeks. The comprehension skills that were taught over the period are presented in Table3.

Table 3. The Division of Comprehension Skills to be taught for Six Weeks

Week	Skills
Week 1	Prediction, silent reading, vocabulary, answering questions, reading aloud, and summarizing
Week 2	Prediction, silent reading, vocabulary, answering questions, reading aloud, and summarizing
Week 3	Prediction, silent reading, vocabulary, answering questions, reading aloud, and summarizing
Week 4	Prediction, silent reading, vocabulary, answering questions, reading aloud, and summarizing
Week 5	Prediction, silent reading, vocabulary, answering questions, reading aloud, and summarizing
Week 6	Prediction, silent reading, vocabulary, answering questions, reading aloud, and summarizing

Table 3 shows that all the comprehension skills were taught every week using different comprehension passages. The experimental group was taught using the advance organizers while the control group was taught using the conventional method of teaching reading comprehension. Each group was exposed to a total of six sessions (that is six exposures per group).

Validity of Instrument

Validity is the extent to which an instrument achieves the aim to which it was set or measures what it is supposed to measure. An instrument is said to be valid if it fulfills the purpose for which it is designed and its suitability. The instrument was subject to appraisal by the researcher's supervisor and two expert lecturers in the Department of Curriculum and Instructional Technology (CIT), Faculty of Education, University of Benin, Benin City. They examined the test items for content validity and made suggestions for amendment before the final version was produced. The corrections and suggestions made by these experts were taken into cognizance and incorporated

thereafter. It is believed that the instrument is valid and is an adequate measure for the subject under study.

Table 4: Table of Specification for the Reading Comprehension Achievement Tests

Test	Passage	Topic	No of Items	Level of Thinking A	B	C
Pretest	Passage 1&2	Reading for specific information	5	2 (1,3)	2 (6,11)	1(9)
		Identifying main ideas	3	2 (7,12)	1 (14)	-
		Matching tittles with paragraphs	1	-	-	1(8)
		Guessing meaning from context	4	2 (2,5)	2(10,13)	-
		Identifying referential information	2	1 (4)	-	1(15)
Posttest	Passage 1&2	Reading for specific information	5	2 (2,6)	2 (1,12)	1 (9)
		Identifying main ideas	3	2 (7,10)	1 (11)	-
		Matching tittles with paragraphs	1	-	-	1(8)
		Guessing meaning from context	4	2 (4,15)	2 (3,13)	-
		Identifyingreferential information	2	1 (14)	-	1(5)
		Total	30	14	10	6

Key: Code for level of thinking

A: Knowledge: Remembering, recognizing, lifting, describing, retrieving, naming and finding Information from the text.

B: comprehension: understanding, explaining ideas or concepts, interpreting, summarizing, paraphrasing, and classifying information in the text.

C: Application: applying, using information in another similar situation, implementing, carrying out, using, and executing information in a text.

Reliability of Instrument

Reliability of an instrument is the degree of stability and consistency over time. An instrument is said to be reliable if it is dependable and trustworthy. The reliability of this study was obtained from

a pilot test carried out by the researcher on 20 students. The reliability was tested using Kuder Richardson coefficient. For RCAT1, a Kuder Richardson coefficient of 0.78 was obtained while RCAT 2 had a Kuder Richardson coefficient of 0.729. These two values indicated that the instruments are reliable.

Methods of data Collection

The researcher sought the permission of the two principals to engage their students for the research by presenting a letter of introduction from the Head of Department, introducing the researcher so as to create awareness and familiarization with the schools and their teachers. Before treatment, both the experimental and control groups were exposed to RCAT 1 which was an achievement test and comprised of two comprehension passages with fifteen multiple choice questions after which the experimental group was exposed to treatment with the use of advance organizers and the control group was exposed to treatment without the use of advance organizers for a duration of six weeks with one lesson period for each week. This is because the English Scheme of work is sub-divide into teaching the following in a week: grammar, comprehension, vocabulary, and spoken English. The researcher taught the experimental group while the control group was taught by their regular English language teacher. The researcher visited the control group at intervals to ensure strict compliance to the lesson plan by the subject teacher.

After the treatment, both groups were exposed to RCAT 2 which was also an achievement test and comprised of two comprehension passages with fifteen multiple choice questions. The researcher thereafter reviewed and scored the test with no knowledge of the students' identity.

Method of Data Analysis

The data collected were scored, coded and analyzed using descriptive (mean and standard deviation) and inferential statistics (Independent Sample t-test, Paired Sample t-test and Univariate Analysis of Variance [ANCOVA]). To determine whether students in both the experimental and control groups were at par before the treatment, an Independent Sample t-test was conducted using the pre-test as the dependent variable. Preliminary analysis showed a calculated t-value of -.326 and a *p*-value .745 testing at an alpha level of 0.05, the *p*-value is greater than the alpha level, so, there is no significant difference in the pretest scores of students taught using advance organizers and those taught using basal method. Hence, Independent Sample t-test was used to test hypothesis one. For hypothesis two, paired sample t-test was used. For hypothesis three, ANCOVA was used as the preliminary analysis showed a calculated t-value of 3.014 and a p-value .005 testing at an alpha level of 0.05, the p-value is less than the alpha level, so, there is a significant difference in mean scores of male and female students taught using advance organizers at pretest. ANCOVA was also used to test hypothesis four. The four hypotheses were tested at 0.05 alpha level of significance.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

This chapter presents the results obtained from the analysis of data using the statistical procedures discussed earlier in chapter three. The analysis of the data is presented in two sections, the first section deals with the presentation of results, and the second section presents the discussion of the findings.

Presentation of Results

- *Hypothesis 1: There is no significant difference in reading comprehension achievement of students taught with advance organizers and those taught with the basal method.*

The descriptive statistics of the post-test achievement scores of students taught with the two methods; advance organizers and basal method are presented in Table 2.

Table 2: Summary of Mean and Standard Deviation of Post-test Achievement Scores of Students Taught Reading Comprehension Using the Two Methods

Groups	N	Mean	Std. Deviation
Experimental	33	13.91	.947
Control	69	13.14	.912

Table 2 shows that students in the experimental group taught with advance organizers had post-test mean score of 13.91 and SD of .947. While students in the control group taught with the basal method had post-test mean score of 13. 14 and SD of .912. As the preliminary analysis showed that there was no significant difference in the initial ability level of students in the two groups; experimental and control in the pre-test, therefore, to determine whether there is significant difference in students' reading comprehension achievement, Independent Sample t-test was conducted. The summary of the analysis is presented in Table 3.

Table 3: Summary of Independent Samples t-test of Difference in Reading Comprehension Achievement of Students taught with Advance Organizers and those taught with the Basal Method

	Method	N	Mean	Standard Deviation	df	t	Sig (2-tailed)	Result
Posttest	Advance Organizers	33	13.91	.947	100	3.910	.000	Rejected
	Basal	69	13.14	.912				

Table 3 shows that there was a significant difference in the scores of students taught with advance organizers (Mean = 13.91, SD = .947) and students taught with the basal method (Mean = 13.14, SD = .912), t(100) = 3.910, p = .000. These results suggest that method has a significant effect on students' achievement in reading comprehension. Therefore, hypothesis 1, which states that there is no significant difference in reading comprehension achievement of students taught with advance organizers and those taught with the basal method was rejected.

Hypothesis Two: There is no significant difference between the pretest and posttest scores of students taught with the use of advance organizers.

The descriptive statistics of the pretest and posttest scores of students taught reading comprehension with the use of advance organizers is presented in Table 4.

Table 4: Mean and Standard Deviation of Pretest and Post Test Scores of Students Taught with the Use of Advance Organizers

		N	Mean	Std. Deviation
Pair 1	Pretest	33	12.85	1.50
	Posttest	33	13.91	.947

Table 4 showed a mean gain of 1.06 between the pretest mean scores and the posttest mean scores of students taught reading comprehension with the use of advance organizers. To determine if the difference between the pretest scores and the posttest scores of students taught with the use of

advance organizers was significant, a paired sample t-test was conducted. The summary of the analysis is presented in Table 5.

Table 5: Summary of Paired Samples t-test of the Pretest and Posttest Scores of Students' taught Reading Comprehension with the use of Advance Organizers

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Posttest – Pretest	1.06	.747	.130	.795	1.33	8.151	32	.000

Table 5 shows (t = 8.151, p = .000). This shows that the teaching intervention improved students' scores taught reading comprehension with the use of advance organizers. In this data set, it improved marks on the average by approximately 1 point. The 95% CI is from 0.8 to 1.3. This shows that, although the difference in scores is statistically significant, it is actually relatively small. Since p = .000 is less than the alpha value 0.05, the hypothesis which stated that there is no significant difference between the pretest and posttest scores of students taught with the use of advance is rejected.

- *Hypothesis 3: There is no significant difference in reading comprehension achievement of male and female students taught with the use of advance organizers.*

The descriptive statistics of the posttest scores of male and female students taught reading comprehension with the use of advance organizers is presented in Table 6.

Table 6: Summary of Mean and Standard Deviation of Post-test Reading Comprehension Achievement Scores of Students Taught with the Use of Advance organizers

Gender	N	Mean	Std. Deviation
Male	21	14.14	.910
Female	12	13.50	.904

Table 6 shows that students in male students in the experimental group taught with the use of advance organizers had post-test mean score of 14.14 and SD of .910. While the female students in the same experimental group had post-test mean score of 13. 50 and SD of .904. As the preliminary analysis of the pretest reading comprehension achievement scores of male and female students taught with the use of advance organizers showed a significant difference, ANCOVA was used to marshal out the initial differences using the pretest score as covariate. The result of the analysis is presented in Table 6.

Table 6: Summary of ANCOVA of Gender Difference in Reading Comprehension Achievement of Students taught with the use of Advance Organizers

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	24.284[b]	2	12.142	81.981	000
Intercept	12.608	1	12.608	85.125	000
Pretest	21.128	1	21.128	142.655	000
Sex	.392	1	.392	2.646	114
Error	4.443	30	.148		
Total	6413.000	33			
Corrected Total	28.727	32			

a. Treatment = Experimental

b. R Squared = .845 (Adjusted R Squared = .835)

The F-value for sex effect in Table 6 is 2.646 with df = (1,30) with a p-value of .114. Testing at an alpha level of 0.05, the p-value (.114) is greater than the alpha level (0.05) showing no significance. So, hypothesis 3, which states that there is no significant difference in reading comprehension achievement of male and female students taught with the use of advance organizers was retained. It can be concluded that there is no significant gender difference in reading comprehension achievement of students taught with the use of advance organizers.

- *Hypothesis 4: There is no significant interaction effect of method by gender on students' achievement in reading comprehension.*

The descriptive statistics of students' achievement in reading comprehension classified by method and gender are presented in Table 7.

Table 7: Summary of Mean and Standard Deviation of Students' Reading Comprehension Achievement Classified by Method and Gender

Method	Gender	N	Mean	Std. Deviation
Advance Organizers	Male	21	14.14	.910
	Female	12	13.50	.904
	Total	33	13.91	.947
Basal Method	Male	40	13.33	.888
	Female	29	12.90	.900
	Total	69	13.14	.912

Table 7 shows that male students in the group taught with the use of advance organizers have post-test mean score = 14.14 and SD .910, against that of the females' post-test mean score = 13.50 and SD .904. This shows that the male students in the group taught with the use of advance organizers performed better than the females. Table 7 also shows that the male students in the group taught with the use of the basal method have posttest mean score of 13.33 and SD .888, against that of the females' post-test mean score 12.90 and SD .900. This shows that the male students in the group taught with the basal method also performed better than the females.

To determine whether there was interaction effect of method by gender on students' reading comprehension achievement, a 2-way between groups factorial ANCOVA was used. This is presented in Table 8.

Table 15: Summary of ANCOVA Analysis of Interaction Effect of Method by Gender on Students' Achievement in Genetics

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	46.627[a]	4	11.657	21.876	000
Intercept	68.324	1	68.324	128.223	000
Pretest	27.349	1	27.349	51.326	000
Sex	.494	1	.494	.927	338
Method	13.923	1	13.923	26.130	000
Sex * Method	.264	1	.264	.495	483
Error	51.687	97	.533		
Total	18392.000	102			
Corrected Total	98.314	101			

a. R Squared = .474 (Adjusted R Squared = .453)

The F-value for interaction effect of method by gender in Table 8 is .495 with df = (1.97) and p-value =.483. Testing at an alpha level of 0.05, the p-value (.483) is greater than the alpha level (0.05), so hypothesis 4, which states that there is no significant interaction effect of method by gender on students' achievement in reading comprehensions is retained. It was concluded that there was no method by gender interaction effect on students' achievement in reading comprehension.

DISCUSSION OF FINDINGS

The findings for hypothesis one revealed that students taught reading comprehension with the use of advance organizers performed significantly better than those taught eitb the basal method (13.91, 13.14 respectively). Using advance organizers, students were active and as a result, tgr instruction was effective.

The advance organizers method of teaching reading comprehension allows students to construct their learning. It helps them to build on what they already know, creates a focus for the study,makes them comfortable about the material, increase their interest, makes them to see the relationship as well as the link between the concepts and helps them to clearly state and express their ideas .The result of this study is inconsonance with that of Ausubel (1960), Ausubel & Fitzgerald (1963). These studies had previously reported that the use of Advance organizers is better than the basal method.

The findings for hypothesis two revealed tgsr there is a statistical significant difference between the pretest and posttest scores of students taught reading comprehension with the use of advance organizers but this difference is relatively small. (12.85, 13.91)

The findings for hypothesis three revealed that there is no significant difference in the reading comprehension achievement of male and female students taught reading comprehension with the use of advance organizers which means that gender has no effect on students' achievement in reading comprehension. This findings supports the assertion of Nwafor (2002) and Madu &Kasanga (2003) that the difference in the achievement of the acquisition of English as a second language between male and female was not significant.

The findings for hypothesis four revealed that there was no interaction effect of method by gender on students' achievement in reading comprehension. This is confirmed by Honebein's (1996) observation that learning is a social process and not a process that only takes place inside our mind nor is it a passive development of our behaviors that is shaped by external forces. Therefore, gender does not determine the effectiveness of the use of advance organizers. The result of this findings is in agreement with the findings of Minchin Jr (2004) which support the use of advance organizers in the classroom with positive feedback from both students and instructors. These researchers had pointed out that the use of advance organizers is useful for increasing learners understanding even handicaps without any interaction.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

Based on the findings of this study, which resulted from the analyzed data, the consequent interpretations and discussion in the previous chapters, the following summary of findings, conclusions and recommendations are presented.

Summary

This study was done to investigate the effects of the use of advance organizers (concept map and KWL chart) on the dependent variable (achievement in reading comprehension) on students' achievement in reading comprehension in Lagos State. To guide this study, four research questions were raised and hypothesized. Two junior schools were randomly selected out of the eleven (11)

public secondary schools in Ifako-Ijaiye Local Government Area of Lagos State. Two intact classes were randomly selected from the schools to get a sample of 102 students.

The following four research questions were raised

1. Is there any difference between the achievement of students taught reading comprehension with the use of advance organizers and those taught with the basal method?

2. Is there any difference in the pretest and posttest scores of students taught reading comprehension with the use of advance organizers?

3. Is there any difference in the achievement of male and female students taught reading comprehension using advance organizers?

4. Is there any interaction effect of method by gender on students' achievement in reading comprehension?

Research Hypotheses

All the research questions were hypothesized and tested at 0.05 level of significant.

Ho_1. There is no significant difference in the achievement of students taught reading comprehension with advance organizers and those taught with the basal method.

Ho_2. There is no significant difference in the pretest and posttest scores of students taught reading comprehension with the use of advance organizers.

Ho_3. There is no significant difference in the achievement of male and female students taught reading comprehension using advance organizers.

Ho_4. There is no significant interaction effect of method by gender on students' achievement in reading comprehension.

Reading Comprehension Achievement Test (RCAT) was the instrument used for data collection. The instrument had two sections, Section A was designed to seek the demographic information such as name of school, serial number, and students' gender. Section B consisted of two comprehension passages having fifteen multiple choice questions. The reliability was tested using Kuder Richardson coefficient. For RCAT1, a Kuder Richardson coefficient of 0.78 was obtained while RCAT 2 had a Kuder Richardson coefficient of 0.729.

The quasi-experimental research design was adopted for this study and made use of pretest and posttest as well as experimental and control groups. Both the experimental and the control groups were pretested, after which they were exposed to treatment (the experimental group was taught reading comprehension using advance organizers while the control group was taught using the conventional way of teaching reading comprehension which is the basal method). The groups were then posttested at the end of the treatment. The results obtained showed that:

1. There is significant difference in the achievement of students taught reading comprehension with advance organizers and those taught with the basal method.

2. There is significant difference in the pretest and posttest scores of students taught reading comprehension with the use of advance organizers.

3. There is no significant difference in the achievement of male and female students taught reading comprehension using advance organizers.

4. There is no significant interaction effect of method by gender on students' achievement in reading comprehension.

CONCLUSION.

Based on the findings, the following conclusions are drawn: that the use of advance organizers is more effective than the basal method. It is also established that students' achievement in reading comprehension can be enhanced when exposed to graphics and charts. The way reading is taught in most schos do not only affect students' achievement in internal and external examinations in English language but also affects their performances in other subjects in general and method of instruction is a major variable in students achievement in reading comprehension. The findings also revealed that there is significant difference in the pretest and posttest scores of students taught rearing comprehension with the use if advance organizers which means that if teachers make use of advance organizers, it will not only make learning easy but will also aid easy remembrance and therefore affect the students achievement in reading comprehension. Since the findings revealed that there is no significant difference in terms of gender, this means that the use of advance organizers can be used irrespective of gender.

The pedagogical implication of these findings are that English language teachers can put the findings to good effect by applying the experimental method used in this study so as to make reading easy and effective as well as affect their achievement not only in English language but in other subjects in general.

RECOMMENDATION

Based on the findings of this study and conclusion drawn, with a view of improving students' achievement in reading comprehension, it is recommended that English language teachers in junior

secondary schools should be encouraged to use the advance organizers so that students' attitude towards learning can be improved and their achievement in reading comprehension. To achieve this, teachers should be taught through seminars, workshops and in-service training on how to use advance organizers because majority of the teachers may not be familiar with it.

Reading comprehension is an important aspect of English language and so should be given the prominence it deserves in the curriculum. Teachers should be encouraged to teach reading because a child who cannot read is already at disadvantage. Reading is fundamental to any formal learning. So it is recommended that curriculum planners revisit the English language curriculum, place an emphasy on reading and include the appropriate advance organizers for each topic and each level.

Textbook authors should also include a lot of graphics and concept map ideas for teachers in their textbooks and continuously include maps and graphics which are interesting and engaging.

Professional bodies should sponsor further researches on the effectiveness of the use of advance organizers in promoting students achievement in other aspects of English language.

SUGGESTIONS FOR FURTHER STUDY

Based on conclusions and recommendations of this study: it is suggested that:

- This study be replicated in other local governments, states and extended to other classes. This will increase the number of options available to teachers and students as well as the discoveries if factors that may affect the effectiveness of the use of advance organizers.

- Other researchers could investigate the use of the other types of advance organizers in reading comprehension as this study only investigated the use of KWL chart and concept map out of all the types.

- other researchers could also investigate the use of advance organizers in the other areas/segments of English language such as vocabulary development, grammatical structures, summary and oral English.

-, the study be replicated usinga longer period of time since the six(6) weeks duration used for this study may not have been significant enough.

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