

**COOPERATIVE AND GENERATIVE INSTRUCTIONAL STRATEGIES AS
DETERMINANTS OF NIGERIAN COLLEGES OF EDUCATION STUDENTS'
ACHIEVEMENT IN READING COMPREHENSION**

BY

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ENGLISH LANGUAGE EDUCATION

**A Ph.D. THESIS SUBMITTED TO THE DEPARTMENT OF ARTS EDUCATION,
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FULFILLMENT OF PART OF REQUIREMENTS FOR THE AWARD OF DOCTOR
OF PHILOSOPHY IN ENGLISH LANGUAGE EDUCATION**

DECLARATION

I, ABDULSALAM Nike Abiodun (93/036305) hereby declare that this thesis titled: Cooperative and Generative Instructional Strategies as Determinants of Nigerian Colleges of Education Students' Achievement in Reading Comprehension is a record of my work. It has neither been presented nor accepted in any previous application for a higher degree. All sources of the information have been specifically acknowledged.

In addition, the research work has been ethically approved by the University Ethical Review Committee and has passed the anti-plagiarism test.

Abdulsalam, N. A.

Date

CERTIFICATION

This thesis has been read and certified as meeting part of the requirements of the Department of Arts Education, Faculty of Education, University of Ilorin, Ilorin, Nigeria for the award of Doctor of Philosophy (Ph.D.) Degree in English Language Education.

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DEDICATION

This work is dedicated to Allah the Giver of knowledge;

My paternal grandmother, (Late) AlhajaSalamatSulyman;

My children: Abdulmuqsit, Abdulazeem, Moh. Labeeb and Muhammad

My husband,MallamAbdulateefAbdulsalam

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ABSTRACT

Reading is a literacy skill that its comprehension enhances the understanding of other subjects. Despite various researches on reading instructions, the trend of low performance of students in national examinations in English Language still continues, this is a threatening inhibition to the attainment of the educational goals. This study is a remedy seeking measure bearing in mind the crucial role of reading in formal information retrieval. Therefore, the aim of this study was to assess Jigsaw IV Cooperative Instructional Strategy (J4CIS) and Question-Generation-and-Answering Strategy (QGAAS) as Determinants of Nigerian Colleges of Education Students' Achievement in Reading Comprehension. The objectives were to: (i) examine the entry achievement level of students in reading comprehension; (ii) ascertain the effects of J4CIS, QGAAS and a combination of the two on students reading comprehension at the literal, inferential and evaluative levels; (iii) assess the influence of gender, course of study and passage content on students' achievement in reading comprehension when exposed to J4CIS, QGAAS and a combination of the two.

The study adopted the quasi-experimental research design. Purposive and simple random sampling techniques were used to select 300 participants from the three Kwara State Colleges of Education. Reading comprehension achievement tests were used for the data collection; items of the tests were adopted from recommended texts and were validated by language experts. Data collected were analysed using percentages and Analysis of Covariance (ANCOVA) at 0.05 level of significance.

The findings of the study were that:

- i. before the treatments, most students can read but a few comprehend effectively with low and poor grades (control; 53.30%, QGAAS; 38.67%, J4CIS; 37.33%, combination; 34.67%, and Poor (control; 46.67%, QGAAS; 61.33%, J4CIS; 62.67%, combination; 63.35%)
- ii. a significant difference exists in the reading achievement of students taught with J4CIS, QGAAS and a combination of the two ($F=90.15; P=0.00 < 0.05 = H_{01}$ rejected) in favour of J4CIS+QGAAS;
- iii. a significant difference exist in the reading achievement of students taught with J4CIS, QGAAS and a combination of the two at the literal, inferential and evaluative levels of comprehension (Literal; $F=393.798; P=0.000 < 0.05 = H_{02}$ rejected. Inferential; $F=662.865; P=0.00 < 0.05 = H_{02}$ rejected. Evaluative; $F=307.305; P=0.00 < 0.05 = H_{02}$ rejected)
- iv. gender does not have any significant influence on the reading achievement of students when exposed to J4CIS, QGAAS and a combination of the two ($F=0.59; P=0.44 > 0.05 = H_{02}$ retained;
- v. course of study does not have any significant influence on the reading achievement of students when exposed to J4CIS, QGAAS and J4CIS+QGAAS ($F=0.10; P=0.91 > 0.05 = H_{03}$ retained; and
- vi. passage content had a significant influence on the reading achievement of students when exposed to J4CIS, QGAAS and J4CIS+QGAAS, in favour of familiar content ($F=11.09; P=0.00 < 0.05 = H_{04}$ rejected)

The study concluded that literal, inferential and evaluative levels of comprehension can be better enhanced when learners are exposed to either J4CIS, QGAAS or both. This implied that these strategies embraced communicative teaching since the learners get meaningfully involved. The study recommended that teachers should employ the use of either J4CIS, QGAAS or both in reading instruction so as to integrate other language skills and improve students' achievement level.

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CHAPTER ONE

INTRODUCTION

Background to the Study

Reading is a tool for learning all other subjects in the curriculum. It involves a conscious activity to get the information of a given text in order to be able to appreciate the total import of the text. Lawal (2004) defines reading as a creative and a heuristic activity that does not only influence our behaviour (for better or for worse) but also assists us in performing tasks and solving problems which otherwise would have been difficult if not impossible. He further classifies reading as a linguistic activity, psycholinguistic guessing game, pragmatic and metaphysical process. Olajide (2013) sees reading as complex in nature; this is because it is a mechanical and productive activity that requires concentration and sensitivity from whoever carries it out. He describes reading as a complex process that proficient readers give to the text as much as they take. He explains that they make meaning of the text by using their own prior knowledge and experience. Proficient readers constantly predict the meaning of a text while they read. They continuously anticipate what will come next and draw inferences from the text as well as the world around them. It is this continuous interaction with the text that allows readers to make sense of what they read.

Reading affects every aspect of a student's learning, from ability to listen to the acquisition and exercise of critical reading and comprehension skills to the successful application of reading as part of one's life skills as a young and aging adult. Morocco (2001) observes that inadequate reading ability can diminish a student's acquisition of the knowledge and skills embedded in the general education curriculum; it can in turn reduce learning outcome. Lawal (2004) asserts that the world cheats those who cannot read because reading is a tool for survival in the modern and competitive age. He further states that these

days mis-education is a product of misreading and people believe that the illiterate ones are those that cannot read. Reading is a selective process. The Reading Rocket (2015) has it that reading involves partial use of available minimal language cues selected from perceptual input on the basis of the reader's experience. It explains further that as this partial information is processed, tentative decisions are made to be confirmed, rejected or refined as reading progresses.

Reading is one of the best ways to give creative orientation to one's mind. It enriches our thoughts, widens our vision and enhances our knowledge (McCarthy, 2005). Muhammed (2012) sees reading as a source of all intellectual knowledge and imagination. Linden and Wittrock (1981) explain that reading has the power to transport readers to different worlds, share and communicate experiences that most people can only dream about. Lawal (2004) has described reading as a high surrender value since language skills can be developed through it. It is also the window through which one peeps into the outside world as it is a vital instrument used in reducing the world to a global village. He explains that the most significant value of reading either in its linguistic or generic sense is that it is a tool for the acquisition of all forms of formal knowledge, which if rightly guided, would lead to a realisation of God as the locus and focus of all knowledge.

In a similar vein, Adegbite (2004) concludes that our personalities are the sum total of our endowment and experience while a considerable part of the experience is acquired through the medium of the print either electronic or manual which we read. Among the general goals of Education in Nigeria are the inculcation of national consciousness, values and national unity (FRN, 2013). Also, the specific goals of education in Nigeria among others are to:

- ensure and sustain unfettered access and equity in education for the total development of the individual; and
- ensure periodic review, effectiveness and relevance of the curriculum at all levels to meet the needs of the society and the world.

These and other goals of education can only be achieved through effective and comprehensive reading. Massey (2003) affirms that reading is a tool needed by learners to understand all other subjects and the scholar considers it as the fundamental right to life. As a part of reading, comprehension is the goal of reading and it is defined as intentional thinking during which meaning is constructed through interactions between the text and readers (Adegbite, 2003). Thus, readers derive a meaning from a text when they engage in intentional and problem-solving thinking processes. The National Reading Panel (2000) identifies comprehension as the basic components of reading instruction. It is very paramount to reading instruction; this means that reading without understanding is a mere waste of time. Comprehension is an important tool for reading and it is the medium through which readers gain the meanings of words constructed by someone else.

Comprehension process involves an active intentional thinking process through which the reader constructs a meaning (NTI, 2000). Dorothy (1995) perceives comprehension as a construct which cannot be directly measured. She maintains that one can only infer that someone “understands or comprehends” from the overt behaviour of the person. This is because comprehension is a complex intellectual process involving a number of abilities such as word meaning and verbal reasoning. Without word meaning and verbal reasoning, there would be no reading comprehension, and without reading comprehension there would be no reading. She further identifies four different levels of comprehension. A categorisation, which she claims, is originally proposed by Nila (1969). They are literal, interpretative, critical and

creative levels of comprehension. She equally observes that comprehension involves thinking. As there are various levels in the hierarchy of thinking, so there are various levels of comprehension. This implies that higher levels of comprehension would obviously include higher levels of thinking.

In a similar vein, Lawal (2004) identifies four main hierarchical levels of reading comprehension. They are: literal, inferential, evaluative and creative levels. The literal level is the level of understanding the actual or factual meaning of a text. It is described as the lowest level of reading comprehension because the reader recognises, identifies and recalls the main gist and the relevant ideas in a text. Inferential level is the level where readers should be able to show a deeper understanding of words, statements and figurative expressions; predict outcomes; draw inferences and identify implied ideas. While evaluative level is the comprehensive level where readers should be able to express their independent opinions and pass judgment on what they read. Creative level, which is the highest level, leads to the making of a balanced judgment about the text and enables the readers to bring out something new, personal and relevant to the text like suggesting an alternative title, summarising the text, or re-writing part or all of it. This level is intellectually demanding because it enables readers to fully utilise their knowledge of content effectively.

According to Gafar (2012), the major skills involved in the evaluative level of comprehension are categorised into ability to:

- a. go beyond both surface and deeper meanings
- b. assess or criticise what was read in terms of the content and the method used by the author. The creative level which is the highest level of comprehension deals with how students generate ideas which are not explicitly stated but relevant to the

material, and the skills required from students at this level of comprehension include ability to:

- (a) summarise the major components in a passage or text,
- (b) relate ideas from texts to practical experiences and
- (c) project or extend ideas from written materials to practical situations.

NTI (2015) explains that reading for evaluation and creativity demands thorough understanding of the passage because it calls for the ability to interpret the stated and unstated writer's intention. It further states that evaluative and creative types of reading comprehension include the readers' ability to relate together merits, demerits, gaps yet unfilled and contradictory views expressed by the writer to formulate his own value judgment or opinions.

Olaofe (2004) observes that creative reading involves series of interpretative tasks which lead to the provision of answers to the following questions:

- 1. what does the passage give? What has the passage not given?
- 2. why has the writer stated and not stated this way or that way?
- 3. why is the situation stated in the passage developed or operated?
- 4. what trends are noticed in the writer's statements, presentations or points of view?

The evaluative reading provides answers to questions like:

- 1, to what extent is the content discussed?
- 2, how important or relevant is the content?
- 3, what are the areas of strengths and weaknesses?
- 4, how effective or successful is the question?

Adegbite (2003) laments that reading comprehension has been misunderstood in secondary school classroom because the skill is learnt by mere intensive individual work in which textual passages are read orally or silently by learners and mainly literal questions are thrust upon them to test their comprehension.

Reading comprehension refers to the act of understanding and constructing meaning from written words. It includes all of the processes related to deriving a meaning from a written language and constructing a meaning from a written language. “Deriving meaning” indicates that there is a meaning in texts which needs to be understood. “Constructing meaning” indicates that readers often go beyond the meaning explicitly contained in the text and add to that meaning based on their own experience and their ability to infer an additional or deeper meaning (Yivisaker, 2006:64). Thus, reading comprehension is much more than the ability to read individual words and know what those words mean, but to understand the meaningful message sent by the author.

Foyewa (2003) explains that a person, who possesses capabilities to understand lexical and structural meanings of the words, phrases and sentences, takes on complete phrases or groups of words at once when reading, using appropriate sounds, juncture, stress and intonation pattern, recognising the meaning of various graphic signals (such as punctuation marks) and can read at normal speed, is the one that can comprehend a text. Goff (2004) says that reading comprehension entails the successful extraction of meaning from a written text.

Adebisi (2012) sees reading comprehension as a holistic process of constructing meaning from the written text through the:

- (i) interaction of the knowledge the reader brings to the text, that is, word recognition ability, world knowledge and knowledge of linguistic conventions.
- (ii) reader's interpretation of the language that the writer used in constructing the text, and
- (iii) situation in which the text is read.

A critical look at the various submissions depicts a clear picture that all definitions recognise that reading comprehension involves the construction of meanings from texts, using a wide variety of skills and knowledge. However, there are different factors that cause inadequate comprehension of a text. These factors include: behaviour problems, low academic achievement, low socio-economic status and retention (Gafar, 2012). Barbara (2011) also asserts that students with low socio-economic background may rarely take time to read or their parents may rarely take time to read to them or may not have the time to do so because of too many domestic works, especially in developing countries such as Nigeria. Dole (2000) observes that reading comprehension is affected by the type of instructional strategies used in teaching it. The instructional strategies teachers use help to shape learning environment, represent professional conceptions of learning and the learner, the conception can also enhance students' interest, attitudes and academic performance in the long run.

Strategy is a term that originated from the Greek word "strategia" which means "generalship" (William, 2005). Yunusa (2012) refers to strategy as a plan, that is, a means of getting from here to there. In other words, he refers to strategy as a "perspective", that is, vision and direction. Fakeye (2002) opines that strategy consists of the important actions necessary to realise directions. She further states that strategy answers questions on what are the ends one seeks and how should one achieve them. The concern of strategy is based on how someone will achieve his/her aims. According to Gafar (2012), strategy is a

Carefully designed action that has a way of improving a course or a task. Olorundare (2009) explains that learning instruction is an interaction between the tutee (learners) and the tutor (a human being, a machine or a material). He further states that a theory of instruction usually sets forth rules concerning the optimal way of achieving knowledge. The instruction itself has two main objectives that the child learns a rule and that the child is able to apply such a rule over a wide range of apparent disparate circumstances, that is, to achieve maximum transfer. Instructional strategy means a carefully devised or designed instruction to achieve a goal.

However, Lawal (2009) is of the opinion that the term "strategies" belong more to political science and have recent incursion into educational phraseology. He therefore explains the term as a technique which describes specific steps, actions and activities a teacher either adopts or initiates at the key stages of introducing, explaining, giving practice, evaluating and recapitulating a lesson. He asserts that a useful technique often entails the use of appropriate materials or instructional aids to facilitate, concretise and consolidate learning. An instructional strategy is defined as the plan of action or what will happen in a class during a given period in order to achieve the intended behavioural objective. Instructional strategies can be thought of as teaching techniques, but sometimes these strategies involve more input from students (Barnett, 1988). Smith and Dwyer (1995) describe instructional strategy as the approach taken to facilitating learning. It can be either more supplanting (meaning is supplied by the instructor) or more generative (meaning is generated by the learners interpretation) (Wang, 2003). A reading instruction, therefore, should be an integral part of the learning process through which other content areas will be understood.

Jigsaw is a developed model of cooperative strategy. It was developed by Elliot Aronson and his associates in 1978 at the University of Texas, Austin. It was originally

designed to breakdown stereotypes and prejudice among classmates as a way for students in recently desegregated schools in Austin to interact in the classroom in a way that would reduce suspicion and destruct, reduce hateful behaviour and increase cooperation in the classroom. Jigsaw strategy is similar to the structure of a game that carries the same name “jigsaw”. Though Aronson (1978) was the pioneer of the strategy, it was later modified by other researchers, jigsaw II by Slavin (1987), jigsaw III by Stahl (1994), jigsaw IV by Holliday (2002), reverse jigsaw by Heeden (2003) and subject jigsaw by Doymus (2007); so, there are six jigsaw cooperative models. In jigsaw class, students were assigned to different “home group”; each member of a “home group” would be assigned a different material or topic. After that, members of the different home groups who have the same learning material or topic gathered together to form “expert group” to discuss and communicate with each other until they master the material or topic. Later, the students will return to their original “home group” to turn-teach the material or topic to other members of their group.

Jigsaw II; all students read all of the materials then specialise in one area for their expert groups and when quiz time comes, students’ individual scores are averaged within each group to arrive at a group score, which is then compared with other groups. This encourages groups to work harder to ensure that all members learn. Jigsaw III variation required students to complete “expert sheets” that provide notes for teaching the material or topic to the “home group”; then each student will be given individual assessments as opposed to a group evaluation but builds in a group review before the final quiz. Jigsaw IV appears to be more developed for complete learning compared to jigsaws I, II and III. Unlike other models jigsaw IV includes three new features; an introduction, quizzes and re-teaching of materials after individual assessment. It confirms whether the expert members are specialised by testing them. The result of the text determines the missing parts of the learning and would

be completed by the teacher's guidance. The same implementation is repeated to the home group after the expert members have carried out their topic presentation in home group.

Mahmoud (2015) recognises three (3) main stages of designing a jigsaw model; these are (a) planning (b) implementing and (c) evaluating.

(A) Planning Stage: contains four (4) stages put in the table below.

- | | | |
|------|----------------------------|--|
| i. | Purpose Identification | The teacher makes students understand that jigsaw is mainly designed to acquire organised knowledge through specialty groups and identify the lesson's behavioural objective(s). |
| ii. | Designing Study Materials | The teacher is responsible for preparing the study material and tools that would be needed for the lesson. |
| iii. | Grouping the Students | The teacher would group students according to their interest and achievement levels. |
| iv. | Designing Evaluation Tools | The teacher needs to prepare a test in view of the identified behavioural objective. |

Table 1. Designing Jigsaw Model; Stage 1: Planning Stage

(B) **Implementing Stage:** also consists of four (4) aspects in the table below.

- | | | |
|------|---------------------------|---|
| i. | Grouping of Information | <ul style="list-style-type: none">- Distributing students into small groups.- Distributing topics/questions to individual students of each group to assume the role of expert in the assigned unit.- Studying the subjects based on the expert reports. |
| ii. | Meeting Experts | <ul style="list-style-type: none">- Experts assigned the same unit meet to discuss its elements and compare notes. |
| iii. | Team Reports | <ul style="list-style-type: none">- In their meeting, experts prepare a report covering the main points of the topic to share it with their group members. |
| iv. | Assessment and Evaluation | <ul style="list-style-type: none">- Direct the work of groups and develop their concepts.- Monitor students' activities and get teachers involved in the group work.- Encourage students by using immediate reinforcement and feedback. |

Table 2: Designing Jigsaw Model; Stage 2: Implementing stage

(C) **Evaluation stage;** consists of three (3) main levels in the table below.

Process	Description
i. Group Evaluation	Determining the work progress of groups and students' participation in the teamwork.
ii. Evaluation of experience progress	Determining the students' progress in the experts' group and as a member in his home group.
iii. Evaluation of material comprehension	Giving students a written examination to determine each student's progress in meeting the learning objective.

Table 3: Designing Jigsaw Model; Stage 3: Evaluating Stage

Ige (2015) also describes the implementation of the strategy as follows;

- (a) introduce the strategy and topic to be studied to the students.
- (b) assign each student to a “home group” of 3-5 students who reflect a range of reading abilities
- (c) determine a set of reading selections and assign one selection to each student.
- (d) create “expert group” that consists of students across “home group” who will read the same selection.
- (e) give all students a framework for managing their time and the various parts of the Jigsaw task.
- (f) provide key questions to help the “expert groups” gather information in their particular area.
- (g) provide materials and resources necessary for all students to learn about their topic/question and become experts.
- (h) discuss the rules for reconvening into “home groups” and provide guidelines as each “expert” reports the information learned.
- (i) prepare a summary chart or graphic organiser for each “home group” as a guide for organising the “expert” information report.
- (j) remind students that “home group” members are responsible to learn all contents from one another.
- (k) have students fill all graphic organisers in the home group to gather all the information presented by each “expert”.
- (l) inform “home group” that they will present to the entire class or may participate in some assessment activities.

- (m) circulate to ensure that groups are on task and manage their work well, ask groups to stop and think about how they are checking for everyone's understanding, and ensure that everyone's voice is heard.

Gomleks (2007) similarly outlines the steps used in jigsaw cooperative instructional strategy as follows:

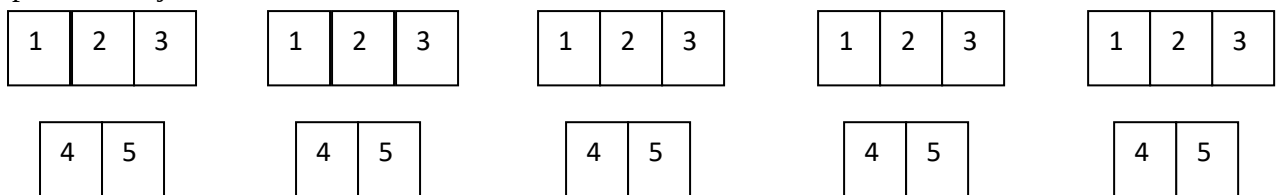
- a) define the group project or major topic on which the class will be working.
- b) randomly break the class into groups of 4-5 students each, usually depending on the size of the class and assign a number (1 to 4-5) to student in each group. This group is called "home group".
- c) assign each student or number a topic in which he or she will become an expert.
- d) the topic should be related facts of a general content theme.
- e) rearrange the students into "expert groups" based on their assigned numbers or topics.
- f) provide the "experts" with the materials and resources necessary to learn about their topics.
- g) the experts should be given the opportunity to obtain knowledge through reading and discussion.
- h) reassemble the original group.
- i) then as experts to teach what they have learned to the rest of the group.
- j) take turns until all experts have presented their new materials.
- k) group presents results to the entire class or they may participate in some assessment activities.

Maden (2011) further explains that jigsaw leads to two groupings; home or habitual (heterogeneous) and the specialists or experts (homogeneous) group. He explains that in this strategy, students are responsible for teaching each other as units of work are divided into

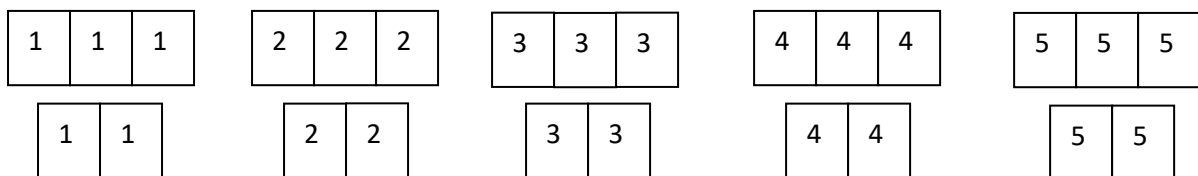
four (4) or five (5) expert areas. Each student in a team is assigned one area, experts from different teams meet together at tables later to discuss their areas and they return to their teams and take turn teaching. This is shown in Figure One (1).

Figure 1: The Three Phases of Jigsaw Grouping

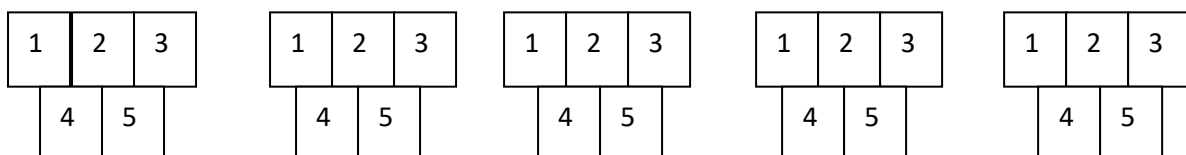
Phase I: students are assigned to (heterogeneous) “home group” based on their scores in pretest, subject combinations.



Phase II: students meet in “expert groups” (homogeneous).



Phase III: students return to “home groups” to teach one another.



According to Mangolio and Xiaoling (2010), the jigsaw classroom reduces student’s reluctance and anxiety to participate in the classroom activities, while it increases self-esteem and self-confidence. In the light of this, researchers have come to conclude that the jigsaw model not only increases the self-esteem and confidence of students, but also improves performance and increases their liking for school and their enthusiasm about learning (Aronson & Patnoes, 2011). They assert that the benefit of the strategy clearly extends

beyond mere positive students' interaction. They therefore outline the following as effectiveness of jigsaw:

- students are interdependent in a positive way;
- students interact to promote learning;
- groups use good teamwork skills; and
- students have an opportunity for analysing how well their groups are functioning.

Wittrock (1974) propounded generative learning theory. His belief about learning was influenced by researches in several areas of cognitive psychology including cognitive development, human learning, human abilities, information processing and aptitude treatment interaction. He emphasises that a learner is not a passive recipient of information, rather he or she is an active participant in the learning process, working to construct meaningful understanding of information found in the environment. He states that “although a student may not understand sentences spoken to him by his teacher, it is highly likely that a student understands sentences that he generates himself” (P.105). He built his model around four parts based on a neural model of brain functioning and cognitive research on the process of knowing. They are generation, motivation, learning and knowledge creation.

From the above submission, the generative instructional strategy has its foundation in neural research. It focuses on selecting appropriate learner-centered instructional activities for learners. This strategy combines the importance of learner and instructional intentionality because of this blending. Bonn and Grabowski (2001) call generative strategy a practical cousin of constructivism and a second cousin of behaviourism while Lee, Kyiyi and Barbara (2009: 223) refer to it as “learning through the person”. The generative instructional strategy

brings together the learner's understanding of learning processes and the design of external stimuli or instruction, describing how a meaning is made for different types of learning outcomes. It requires the learner to generate either organisational or integrated relationships and constructs a personal meaning. Meaning making results from the processes of generating relations among memory, preconceptions, abstract knowledge, everyday experience, domain-specific knowledge and new information.

Wittrock (1991), Haywood (2004), Lee, Kyiyi and Barbara (2009) and Babajide (2010) in their independent researches recognise three generative instructional strategies:

- i. self-regulation in generative learning,
- ii. generative learning strategy and metacognitive feedback and
- iii. prior knowledge in generative learning.

Self-regulated learners are behaviourally, motivationally and metacognitively active participants in their own learning process. Learners are required to regulate their learning process. They make decisions about which information to access, how much time to spend in the different representation/interpretation of information and when and how to revise them. Metacognitive feedback is the communication that makes learners conscious of the learning strategies and styles they are using and whether those strategies are successful. Generative strategy is seen as a strategy that increases the learners' awareness of what they do not know, what they need to know and what learning techniques work.

Prior knowledge implies a generative activity that enhances learners' knowledge generation by creating relationships between the new information and the prior knowledge which often result in the acquisition of new knowledge and learner's self-regulation. They reconstruct the existing ideas into their schemata; their initial conceptions of ideas are either accepted or rejected depending on the event. This makes learners become initiators,

responsible communicators and manipulators of ideas which empower them to test the fitness of their generated knowledge with others. If their ideas are compatible, then learners communicate, build and construct knowledge, if not, they will re-modify their initial ideas.

Features of generative instructional strategy involve distributive type of learners' motivation and taking responsibilities for ones' learning. Learners participate in:

- decision taking about learning and sustaining the internal belief that one can succeed at understanding any concept through one's generation and testing one's ideas and concept
- testing one's voluntary construction of meaningful explanation and useful conceptualisation.

The teacher mainly acts as a facilitator of knowledge in generative instructional strategy classes. The teacher allows learners to understand that success in school begins with the belief in themselves, their abilities and efforts. To achieve this, the facilitator (teacher) should encourage learners in the process of constructing a meaning for instruction and subject matter. These responsibilities can only be achieved if the facilitator identifies the following: the appropriate learning models to be used, learners' pre-conceptions on what to teach, the learning techniques to be used, learner's attitudes and belief that are relevant to what they are about to learn. The facilitator must possess an ability to design instruction that will enable learners generate relationships among the subject matter and learners' previous experiences by engaging learners in generative activities such as note-making, underlying, self-generated questions, generative thinking of connecting passages ideas with life experience and creating personal meaning, summarising, interpretation and making inferences as observed by Wittrock (1991). These are meta-cognition or self-control strategies that are useful for directing self-cognitive and affective thought process.

There are different stages of generative inquiry strategies by different scholars. For instance, Schaverien and Cosgrove's (2000) research based on biology identified six steps: Step 1 Exploration, Step 2 Designing, Step 3 Making, Step 4 Operating, Step 5 Explanation and Step 6 Understanding. Exploration: is the first phase in which learners formulate ideas that are personally salient, identify personal learning goals and outcomes as well as test them against their background experiences. Thus, it implies acknowledging learners' existing capabilities to enable them to generate ideas through experiences. Designing: is the second phase. Learners design and select criteria to test and evaluate currently available ideas appropriate for the context which enables them (learners) to extract "methodologies" from culture (literature) and design a framework within which to test their evolving ideas. Making and Operating: is where the actual testing is done. In this phase, learners use the criteria and framework selected in the design phase to test the initial ideas formulated at the exploration phase which enables learners to erect and test their generated ideas from the designing phase.

Explaining: is the phase where learners consciously explain to themselves and others the value of their newly evolved ideas. They can invent stories to make sense of a text revealed and regenerate ideas, which they developed through explanation; they communicate the values of the newly generated ideas selected by means of test. Understanding: is the last generative stage; according to Schaverien and Cosgrove (2000), it is where the knowledge gained by learners fits with their current knowledge which can be adapted to their environment and the recognition of the generated ideas is felt. Learners understand their new ideas and incorporate them into their past experiences. Hence, understanding acknowledges that the new knowledge and skills have been incorporated into learners' existing knowledge.

Mayer and Wittrock (2006) classify generative instructional activities into five groups: elaboration, summary writings, note-taking, self-explaining and questioning. Elaboration

implies construction of images, analogies or metaphors after an instructional event. Summary writing is getting the main idea of an instruction; note-taking refers to asking students to take notes from the instructional source. Self-explaining is asking students to express their own view of the instruction in their own words while questioning implies encouraging students to generate their own questions from an instructional event. NICHD (2000) defines question-generation as a reading comprehension technique whereby readers ask and answer meaningful questions about the text contents. Question-generation can be at the beginning, during or after reading. Question-generation before reading helps students link their background knowledge to their prior knowledge and make predictions about the text. Questions generated during reading is a way to monitor comprehension and check predictions while after reading questions help students to summarise the text and explore further areas of study. Therefore, this study focused on question-generation-and-answering as a generative instructional strategy and Jigsaw IV cooperative instructional strategy as determinants of Nigerian colleges of education students' achievement in reading comprehension.

Education planners and administrators such as Akande (2003), Abdulkareem (2010) and Kehinde (2012) have constantly and aptly expressed the view that education is not only a costly venture but also that no nation can rise above the quality of her educated citizens. This means that for any meaningful national development, appropriate attention towards the growth and development of education is imperative. In view of this, the government recognises the pivotal roles of quality teachers in the provision of quality education at all levels. It therefore states that teacher education shall continue to be emphasised in educational planning and development (FRN, 2013).

Teachers are the real implementers of the educational policy, aim and curriculum goals. They therefore need to be properly trained. Lawal (2009) affirms that objective formulation

and reformulation which are essentially the duties of classroom teachers require both professional knowledge and skills. It entails breaking down a statement of goals into manageable and consumable units for classroom lesson based on teacher's knowledge of the content; what teaching actually means and what he/she is to teach for optimum learning outcome. Lawal (2009) concludes that an effective teacher understands clearly his/her subject matter, all the possible approaches, methods and techniques and how the three factors interact to facilitate and consolidate learning.

Akande (2003), Adedeji (2005) and Adler (2011) lament that most Nigerian teachers depend largely on the prescribed course material series recommended for use in schools instead of course materials that adopt a wide variety of instructional approaches in a structured and integrated whole, which they could easily follow in teaching. Umar (2000) says that teachers need to have a solid understanding of the curriculum, and the right skills and abilities on how to package and present instruction for students. Researchers such as Umar (2000), Block (2002), Akande (2003), Adedeji (2005), Abdulkareem (2010) and Kehinde (2012) are of the opinion that education in Nigeria has not lived up to its expectations. The systematic failure in the nation's economic system has been attributed to the collapse of educational sector with much of the blame shifted to the quality of teachers.

The minimum qualification for entry into the teaching profession is the Nigeria Certificate in Education NCE (FRN, 2013) while Colleges of Education are among the institutions charged with the responsibilities of producing NCE graduates. According to Abdulkareem (2010), other institutions charged with the responsibilities of producing teachers in Nigeria include:

- Faculties of Education in Universities

- Institute of Education in Universities
- NTI (National Teachers' Institute)
- Schools of Education in Polytechnics
- National Institute for Nigerian Languages (NINLAN)
- National Mathematical Centre

According to Abdulkareem (2010), teacher education is a set of educational activities and experiences designed to equip a prospective teacher with skills and knowledge which build his personality as well as make him a competent teacher. Ajitoni (2008) defines teacher education "as the policies and procedures designed to equip prospective teachers within the knowledge, attitudes, behaviour and skills they require to perform their tasks effectively in the classroom, school and the wider community. Abdulkareem (2010) opines that teacher education encompasses all the activities involved in making a person a competent, sensitive and committed teacher. Kehinde (2012) submits that essential teaching skills and teaching methods are required characteristics or ingredients for effective teaching while methods can be compared to patterns to be followed in teaching. An effective teacher, however, needs to be able to vary his/her strategies to suit the needs of the students.

Fafunwa (2006) observes that teacher education should be basically related to every phase of development because anywhere one turns, be it in the social, economic, political or moral sphere of activities, one is faced with the problem of the need for trained manpower, and even military training cannot take place without competent teachers. Adelowokan and Makinde (2010) refer to teacher education as academic and professional training that teachers undertake prior to their first appointment into teaching. Among the goals of teacher education

(FRN, 2013) is the provision of teachers with the intellectual and professional background adequate for their assignment. It further states that teacher education programme shall be structured to equip teachers for the effective performance of their duties (FRN, 2013).

Over the years, there have been progressive decline in students' performance in public examination. For instance students who had credit passes in five subjects including English language in May/June West African School Certificate Examination (WASSCE) ranged from 38.30% in 2013, 31.28% in 2014, 38.68% in 2015 and improved in 2016 with 52.97% (Adenipekun, 2016). Though there have been considerable improvements in 2016 from the previous years, yet a situation where only half of the candidates had the required credit grades for University admission is certainly not good enough. Causes of the low performance could be attributed to incompetence on the part of the teachers and largely to poor instructional implementation. However, these secondary school leavers also proceed to Colleges of Education as institutions charged with the responsibility of training intermediate teachers.

Also, researches have shown that both jigsaw and question-generation-and-answering instructional strategies are learning from context. Babajide (2010) reveals that question-generation-and-answering instructional strategy is effective in teaching Physics. Adegbite (2000) submits that question-generation-and-answering instructional strategy enhances the teaching of the English vocabulary while Adebisi's (2012) study reveals that it is highly effective in teaching reading comprehension in secondary schools, specifically in Ikere-Ekiti, Nigeria. Mualudi (2011) discovers that jigsaw cooperative instructional strategy is effective in teaching narrative text. Ajitoni and Salako (2014) conclude that jigsaw is highly effective in promoting national unity. To the best knowledge of the researcher, it has not been used in Kwara State primary, secondary and tertiary institutions of learning to test its effectiveness in reading comprehension. This justifies the focus of this study on jigsaw IV cooperative

instructional strategy and question-generation-and-answering instructional strategy as determinants of Nigerian Colleges of Education students' achievement in reading comprehension.

Statement of the problem

The low performance of students in national examinations in English language and the abysmally poor usage of the language among Nigerian College of Education students are threatening challenges to the attainment of educational goals. Many researches have been conducted on reading instruction using various strategies for improving students' performance yet the trend of low performance still continues.

Specifically, researchers such as Olajide (2004), Idowu (2008), Adebisi (2012), Foyewa (2012) among others subscribed to the fact that reading instruction in schools has not fully utilised student's prior knowledge or involved active participation of students in classroom. Ajila (2003), William (2005), Ruwa (2005), Aiyegoro, (2012) and others attributed the failure in reading comprehension to passage feature variables such as type of text structure, passage coherence, concreteness of materials, question format variables, failure to make casual inference, excessive elaborations, vocabulary problems and unfriendly nature of most content areas in textbooks.

Haywood (2004) Ofodu and Adeniyi (2008) Yunusa (2012) Alabi (2013) reported that comprehension does not occur in many classes due to teacher's instructional implementation. Ofodu and Adeniyi (2008) for instance, affirmed that the instructional practices of teachers, lack of reading centres and reading groups constituted great hindrances to reading comprehension. It was observed that these researchers have not specifically treated jigsaw IV cooperative instructional strategy and question-generation-and-answering

instructional strategy in determining students' achievement in reading comprehension. Therefore, this had created a research gap part of which this study filled and also contributed to the existing body of knowledge.

Purpose of the Study

The general purpose of this study was to examine jigsaw IV cooperative instructional strategy (J4CIS) and question-generation-and-answering instructional strategies (QGAAS) as determinants of Nigerian Colleges of Education Students' achievement in reading comprehension. Specifically, the study sought to find out the:

- a. entry achievement level of College Students in reading comprehension.
- b. general performance of College of Education Students in Control, J4CIS, QGAAS and a combination of J4CIS and QGAAS in reading comprehension.
- c. effect of Jigsaw IV cooperative instructional strategy (J4CIS), Question-generation-and-answering strategy (QGAAS) and a combination of J4CIS and QGAAS on reading achievement of College of Education Students
- d. effect of J4CIS, QGAAS and a Combination of J4CIS and QGAAS on the reading achievement of the College of Education Students at the literal, inferential and evaluative levels of comprehension
- e. effect of gender on the reading achievement of College of Education Students when exposed to J4CIS, QGAAS and a combination of J4CIS and QGAAS.
- f. effect of student's course of study on the reading achievement of College of Education Students when exposed to J4CIS, QGAAS and a combination of J4CIS and QGAAS.

g. effect of Passage content (familiar or unfamiliar) on the reading achievement of College of Education Students when exposed to J4CIS, QGAAS and a combination of J4CIS and QGAAS.

Research Questions

A lot were done in this work but the following questions were used to guide this study:

- a. What is the general entry achievement level of the Nigerian College of Education Students in Reading Comprehension?
- b. What is the reading achievement of Nigerian College of Education Students in control, Jigsaw 1V Cooperative Instructional Strategy (J4CIS), Question-Generation-And-Answering Strategy (QGAAS) and a Combination of J4CIS and QGAAS?
- c. Could J4CIS, QGAAS and a combination of J4CIS and QGAAS improve the reading achievement of College of Education Students?
- d. could J4CIS, QGAAS and a combination of J4CIS and QGAAS improve the reading achievement of College of Education Student at the literal, inferential and evaluative levels of comprehension?
- e. Would gender have effect on the reading achievement of College of Education Students when exposed to J4CIS, QGAAS and a combination of J4CIS and QGAAS?
- f. Will J4CIS, QGAAS and a combination of J4CIS and QGAAS improve the reading achievement of College of Education Students based on student's course of study?

- g. Would passage content (familiar or unfamiliar) enhance the reading achievement of College of Education Students when exposed to J4CIS, QGAAS and a combination of J4CIS and QGAAS?

Research Hypotheses

Based on the aforementioned research questions, these hypotheses were formulated and tested in this study:

- H₀₁: There is no significant effect of Jigsaw IV cooperative instructional strategy (J4CIS), Question-generation-and-answering strategy (QGAAS) and a combination of J4CIS and QGAAS on the reading achievement of College of Education Students.
- H₀₂: There is no significant effect of J4CIS, QGAAS and a Combination of J4CIS and QGAAS on the reading achievement of the College of Education Students at the literal, inferential and evaluative levels of comprehension.
- H₀₃: There is no significant effect of gender on J4CIS, QGAAS and a combination of J4CIS and QGAAS on the reading achievement of College of Education Students.
- H₀₄: There is no significant effect of student's course of study on J4CIS, QGAAS and a combination of J4CIS and QGAAS on the reading achievement of College of Education Students.
- H₀₅: There is no significant effect of passage content (familiar or unfamiliar) on J4CIS, QGAAS and a combination of J4CIS and QGAAS on the reading achievement of College of Education Students.

Scope of the study

The study was conducted in the three Colleges of Education established by Kwara State government. This was because the study involves three experimental and a control group. The three Colleges are comparable in terms of gender, school type, year of establishment, ownership, mode of staffing, funding pattern, and students-teacher ratio. The study involved second year students of studies leading to the award of Nigeria Certificate in Education (NCE). The choice of the class was because they had spent a year in the college and were preparing for their teaching practice.

The content scope was within four types of instructional strategies: Jigsaw IV cooperative instructional strategy (J4CIS), question-generation-and-answering Strategy (QGAAS), a combination of J4CIS and QGAAS and lastly, the conventional instructional strategy (CIS). The intervening variables were gender, course of study and passage unfamiliarity while the first three of the four hierarchical levels of reading comprehension identified by language scholars, which are literal, inferential and critical or evaluative levels. These levels of comprehension were examined in this study as the dependent variables.

Two instruments were used in this study. They were: Reading Comprehension Achievement Test (RCAT) for students and researcher-designed instructional guides on the strategies (J4CIS, QGAAS and combination of J4CIS & QGAAS) for research assistants. The statistical tools used to analyse data obtained in the study were Percentage Analyses and Analyses of Covariance (ANCOVA).

Operational Definition of Terms and Variables

Instructional Strategies: are detailed procedures employed in teaching which usually enhanced learning. They comprise the treatments used in this study for the different groups.

Jigsaw IV cooperative instructional strategy (J4CIS): is a cooperative instructional strategy that is characterised by interdependent learning in which each student's part is essential for the completion and full understanding of the lesson. It enables each student of a "home group" to specialise in one aspect of a topic, meet with members from other groups who are assigned the same aspect, master the aspect as "expert group" return to the "home group" to teach the aspect as an expert. With this strategy, each student in the "home group" serves as a piece of the topic's puzzle; and when they work together as a whole they create the complete jigsaw puzzle, team members are then quizzed on the topic.

Question-generation-and-answering Strategy (QGAAS): is a generative instructional strategy whereby learners formulate and respond to questions about situations, facts and ideas while interpreting a text through teacher's modelling and guided practices.

Conventional Instructional Strategy (CIS): is an instructional strategy whereby knowledge is presented in a verbal form by lecturers. It is used mostly in colleges of education in Nigeria. It is also called "talk and chalk" or lecture method.

Levels of Comprehension: refers to the different hierarchical levels of comprehension identified by researchers based on the cognitive complexity of the task involved in the reading exercise.

Literal Level: implies the first level of comprehension where readers are expected to recognize concrete words, phrases, clauses, sentence patterns, recall and identify directly stated facts.

Inferential Level: is the second level of comprehension where readers should be able to show a deeper understanding of words, statements and figurative expression, predict outcomes, draw inferences and identify implied meaning.

Evaluative level: is the third level of comprehension where readers should be able to express their independent opinions and pass valued and balanced judgment based on the fact and ideas that emanate from the text.

Achievement: is the academic performance of learners based on assessment, and it is rated poor, low, average and high in this study.

Gender: refers to the different socio-cultural roles that societies globally assign for male and female as a way of portraying the distinction between them.

Course of study: refers to different courses studied by College of Education Students.

Unfamiliar passages: is theme/content of passage that is strange and new to learners' background and experience.

Determinant: refers to the influence of guided strategies on students' achievement.

Significance of the Study

It is hoped that the findings of this research would be beneficiary to all stakeholders in education, most especially policy-makers, curriculum planners, authors and publishers, classroom teachers, pre-service teachers and future researchers.

The findings could provide empirical information on the relative effects of the strategies: Jigsaw IV cooperative instructional strategy (J4CIS), question-generation-and-answering strategy (QGAAS), combination of J4CIS and QGAAS on students' achievement in the teaching and learning of reading comprehension. It could expose the teachers and pre-service teachers to adopt various appropriate instructional strategies that can improve the

learning outcome of students in reading comprehension, which pave ways for the improved performance in all other courses of study. They could also see the need to attend seminars and workshop where they can update their knowledge to enhance their competence in teaching reading comprehension.

In addition, the outcome of this study could assist the curriculum planners and designers on the need to include the strategies in the curriculum so as to improve students' performance in reading comprehension.

Furthermore, the findings of this study could assist authors and publishers to strengthen the scope of their writings because there is no single strategy that is unique to learning. They, therefore, could use the outcome of the research to improve learners' performance in all courses considering the importance of reading to formal education. This study could also assist them in terms of making good use of self-generated questions to generate a meaning in reading and the jigsaw puzzle in creating a text meaning.

Also, the findings could provide useful empirical evidence for future educational researchers in instructional strategies. The research work could, to a large extent, assist in the realisation of some of the educational goals of the country which include a total integration of the individual into the immediate community, the Nigerian society and the world; the inculcation of national consciousness, value and unity (FRN, 2013).

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter examines some literature related to this study. The review of the related literature is carried out in the following order:

- a. Concept and Scope of Reading Comprehension
- b. Principles and Strategies of Teaching Reading Comprehension
- c. Jigsaw Cooperative Instructional Strategy (JCIS) and Students' Academic Achievement
- d. Generative Instructional Strategy (GIS) and Students' Academic Achievement
- e. Gender and Students' Achievement Level
- f. Theoretical Framework
- g. Appraisal of the Literature Reviewed

Concept and Scope of Reading Comprehension

Ajibola (2006) describes reading as the first step that one takes in one's march toward literacy. Adebileje (2001) sees reading as the cognition of printed or written symbols which serves as stimuli to the recall of messages built up through the reader's past experiences. Olajide (2009) explains that reading is a mental process that involves the acquisition of the meanings intended by the writer in the form of interpretation, reflection and evaluation which encompass thinking, predicting, questioning, evaluating, defining and redefining what is being read. Adebisi (2012) asserts that reading is a purposive act which involves the comprehension and interpretation of the ideas symbolised in a written or printed language. It is a process of communication through which most formal learning takes place. This involves

understanding written language through reading what an author has written in which the reader sets out to understand and respond to the author's message.

Adebiyi (2012) further classifies reading as a mental process involving the interpretation of signs perceived through the sense organs, thoughtful reading requires the interpretation of the word group in the context that the author employed to express his ideas. However, it requires reader's ability to draw inferences, judgment and make critical evaluation of the printed statement. He also submits that reading is an act of communication in which information is transferred from a transmitter to a receiver. It is a form of social interaction between the author and the reader which involves a series of mental processes by the reader in the form of the meaningful interpretation of printed or written symbols.

Abdulsalam (2013) emphasises that reading is the ability of a reader to recognise and interpret correctly words in connected speeches and in print. Olajide (2004) observes that reading is an active process that involves an application of the reader's background knowledge in the comprehension of the texts. He sees reading as an ongoing active process of constructing a meaning rather than a set of discrete skills to be mastered once at a time. According to him, this is because it is a complex multidimensional process whereby a dynamic interaction occurs among the readers, the text and the context of the reading situation. To Dole (2000), reading is the process of bringing to and the getting of meaning from the printed page. Reader's variables interact with the variables of text to bring about the intended and expected meaning of the author. Adebiyi (2012) opines that reading is a psycholinguistic game resulting in an essential interaction between language and the reader's thought. To this effect, a reader is expected to acquire adequate working knowledge of the language in which he/she is reading without which reading would be meaningless.

Lawal (2004) similarly affirms that reading is a linguistic activity, a psycholinguistic guessing game, a pragmatic process and a meta-physical process. He further explains that reading is a linguistic activity because it is an oral process of converting writing into speech, since reading springs from the knowledge of letters (graphemes) and their corresponding sounds (phonemes). As a psycholinguistic guessing game, reading involves constant guessing in which the reader uses semantic, syntactic and graphic cues to confirm or disconfirm the author's message. To sum up, reading, according to Lawal (2004), goes beyond the linguistic, the psycholinguistic and pragmatic processes to include the metaphysical dimension of bringing light to the dark souls of unregenerate humankind. This definition however seems to be the strongest in the sense that all definitions present reading as a mental process of interpreting writers' ideas through adequate understanding of the language of expression and text variables. But, Lawal's (2004) definition extends to the pragmatic process of situating the text of discourse in its natural context and chiefly to metaphysical dimension that reading is natural and it originated from God, the creator, who is the locus and focus of knowledge.

Adigun and Oyelade (2003) believe that to obtain a meaning from printed symbols, the reader uses the symbols to guide the recovery of information from his or her repertoire, and subsequently use the information to construct various interpretations of the writer's message. In essence, reading is an intellectual activity that is directed towards extracting messages from a written text. NTI (2015) state that reading process includes making visual contact with group of letters of the alphabet and relating them to the sounds of the language which they represent. It is a means of language acquisition of communicating and sharing information and ideas. Bailey, Silvern, Brabham and Ross (2004) see reading as the identification of linguistic form from the string of the written configuration that represent them and thus is a complex interaction between the reader and the text. Adebisi (2012) views

reading as the ability to recognise the printed symbols and respond emotionally or otherwise to the meaning of such words or symbols.

Ajibola (2006) observes that reading is a process of utilising textual elements and human experiences together to achieve the understanding of the message which the writer intended in the text. Reading therefore includes tapping the reader's previous knowledge to achieve new knowledge. He further explains that reading entails the retrieval of written language in print either silently or audibly. Akinbiyi (2003) opines that reading is a process of language acquisition concerned with recognition, interpretation and comprehension of a message in print. Alabi (2000) describes reading as essentially a cognitive learning activity that consists of perceiving, processing, interpreting, comprehending and synthesising information that is conveyed by written or printed language. Yunusa (2012) views reading as a cognitive development and socially constructed task that goes beyond understanding the words on a page. Reading is a dynamic process in which the reader constructs a meaning based on the information he/she gathers from the text.

Okwillagwe (1998) states that reading is a purposive act that involves the acquisition of meaning intended by the writer and the readers' personal contributions in the form of interpretation, evaluation, imagining and problem-solving. Adebisi (2012) sees reading as not only a rapid recognition of words or phrases but also an understanding of the thoughts and ideas for which they stand. Foyewa (2003) similarly asserts that reading is a mental process which calls for an ability to perceive, understand and react meaningfully to a printed work. Comprehension is a very vital component of reading, and by all standards the main goal of reading. To Dole (2000), comprehension is the bottom-line of any reading. Odia and Omofofornwan (2007) observe that reading and comprehension mean the same thing. We are not reading unless we comprehend. Reading that does not involve understanding is simply

meaningless. Alabi (2013) affirms that reading and comprehension are complementary concepts and this reflects in the way they are used together like inseparable parts of a coin.

Gafar (2012) affirms that comprehension involves understanding the combination of the ways language devices are used to represent meaning and the content outside of language which it so represents. Comprehension entails ability to understand global meanings of words, paragraph analysis, sentence analysis, and vocabulary recognition. Okwilagwe (1998) opines that comprehension is laying hold with the understanding of the thought beneath the printed words, that is, the ability of a reader to grasp the writer's thought, not in isolated fragments but as an organised whole.

Comprehension involves a lot of mental processes such as recognition, retention and recall. Recognition implies the ability of a reader to understand the familiarities or relationship of a word, a phrase or an idea to another word or a phrase or an idea previously known but apparently forgotten or not thought of. Retention is the act of storing in the memory or of organising mentally into familiarly meaningful units, any information, fact, or other expressions that have been understood. Recall is a measure of what is actually remembered and for all practical purposes, that is, reproduction of what was already comprehended and retained in the memory.

Borokowski and Muthukrishna (1992) state that reading comprehension indicates how readers conceive a task, what textual cues they attend to and how they make sense of what they read and what they do when they do not understand. Ajala (1988) defines comprehension as part of communication process of getting the thoughts that were in the authors' mind into the readers' mind; this involves the transmission of an idea through several imperfect media; the author's mind, the written language and the reader. Yunusa (2012) explains that comprehension is beyond literal recorded facts to hidden meanings or

implications but largely depends on the amount of understanding the language of the text and to be able to think, interpret and assess effectively. Pardo (2004) describes comprehension as the process of readers interacting and constructing a meaning from text, implementing the use of prior knowledge and the information found in the text. Yunusa (2012) however claims that the level of comprehension can be measured by the amount of main ideas and basic facts understood in any reading. Dorothy (1995) reiterates that it is difficult to state definitively how a person achieves comprehension while reading. Some studies by Ajala (1998), Okwilagwe (1998) and Barbara (2011) suggest that good comprehension appears to have certain characteristics such as ability to:

- (i) do inferential reasoning by clearly stating the main or central idea of information; assimilate, categorise, compare, make relationships; analyze, synthesize and evaluate information.
- (ii) engage in meaningful learning by assimilating new material to concepts already existing in the cognitive structures, that is, relating new learning concept to existing one.
- (iii) think beyond the information given by coming up with new or alternative solutions and equally able to decide what information to attend to and what to ignore.

In a similar vein, Olajide (2013) explains that reading is not the same as comprehension theoretically, but they (reading and comprehension) are one and the same thing in practice because reading specialists use both terms interchangeably to mean the same thing. He also identifies four hierarchical levels of comprehension viz literal, inferential, evaluative and creative levels respectively. Literal level, which is the most elementary, requires the readers to recall facts that are overtly stated in the text which can be used to

answer questions on the text and it begins with “who”? ----- “What”? ----- and “where”? The inferential level empowers the reader to suggest relevant additional information based on the text confronted and his/her personal experiences which assist the reader to answer questions that begin with “How”? ---- and “Why?----- The evaluative level leads to the making of balanced judgment about the author’s style and/or some other aspects of the text. Lastly, the creative level is the highest level that leads readers to be able to bring out something new, personal and relevant to the text.

Akinbiyi (2003) Goff (2004) and Adebisi (2012) claim that comprehension means making sense of the world in general and of language in particular. People make sense when they are able to relate new experience to their prior knowledge. Thus, proficient readers must possess some basic intellectual facilities such as intelligence, language and experience for effective and adequate comprehension. Chiang (1998) observes that for smooth comprehension, a reader needs to have enough working knowledge of the language in which he is reading. Okwilagwe (1998) equally admits that effective and efficient reading comprehension demands that the reader has a strong command of the language in which he reads, since a lack of strong language background affects reading comprehension. He advances that for effective comprehension, a mastery of the following is important:

- word group and phonemes of the language
- sentence structure of the language
- connectives or conjunctive devices linking subject, predicate, word groups
- system of verbs and their helpers
- system of punctuations which are the traffic lights in reading

- spelling and pronunciation at the early stage of reading

Reading comprehension implies message reconstruction which requires not only mastering of the language but also the readers' ability to use effectively all the language cues available while reading. Adegbite (2003) notes that comprehension in reading is not only through learner's interaction with a text by recognising words and decoding its content but also by constructing the meaning through predicting, confirming, evaluating and creating messages out of the text content. By doing this, he explains that both the "Top-down" and "bottom-up" procedures are utilised to integrate the higher and lower levels of processing comprehension.

Scott (2001) describes reading comprehension as a complex understanding that involves many levels of processing and one of the most fundamental aspects of comprehension is the ability to deal with unfamiliar words encountered in a text. Odia and Omoformwan (2007) assert that reading comprehension implies the ability of the reader to correctly associate meanings with word symbols, evaluate the meanings suggested in context, select a correct meaning, organise ideas as they read, retain the ideas and use in some future activity. Adegbite (2003) defines reading comprehension as a complex process of deciphering the author's intention through the strategic use of thinking, questioning, anticipating, evaluating and interpreting skills. However; he adds that inability to possess and apply these skills by the learner is inimical to proper and systematic understanding of the text. All submissions show that comprehension unlocks the knot of a written text and it is the essence of reading.

Principles and Strategies in the Teaching of Reading Comprehension

NTI (2015) defines strategy as a particular way of approaching or solving a problem or task at hand; a mode of operation for achieving a particular goal or objectives. Lee and Nelson (2005) observe that learning strategies are activities that are employed to generate knowledge and meaning during learning process. To Abdulsalam (2013), strategies are techniques or activities that contribute directly to the comprehension and recall of learning. Ogunleye and Babajide (2011) similarly affirm that strategy is the particular way of organising different techniques to achieve a set goal. Yunusa (2012) opines that instructional strategies are ways in which learning objectives can be achieved. Teaching involves a strategic translation of goals into performance objectives of an operating unit in the school which is based on objectives that are achievable and meaningful to learners.

Reading strategies are activities carefully planned and arranged in the way that will aid a reader to comprehend any given text in a better way (Adebisi, 2012). Olorundare (2009) sees reading itself as a means of teaching because learners can teach themselves by reading, observing or interacting with phenomena in their environment. Lee and Nelson (2005) definition encompasses other definitions, so it is observed as the most relevant to the study because it explains that learning strategies are activities employed to generate knowledge and meaning during the learning process. This implies that all activities embarked upon by the teacher and students to promote learning are strategies. Barbara (2011) concludes that for reading to be effective, self-confidence and emotional adaptability are essential. Therefore, to enhance reading, there are various strategies which students can adopt either independently or guided by the teacher.

Reading strategies involve ways of processing a text which will vary with the nature of the text, the reader's purpose and the context of situation (Muhammed, 2012). Yunusa

(2012) maintains that reading strategies can be taught and when taught would help improve students' performance on text comprehension and recall. Raphael (2004) similarly submits that knowledge of strategies is important because it makes learning more effective. Johnsey, Morrison and Ross (1992) see the strategy for reading comprehension instructions as cognitive and metacognitive actions that individuals either consciously decide to use or use automatically when attempting to access a written text.

Many English as a Second Language (ESL) researchers such as Adebileje (2001), Olajide (2004), Ofodu (2009), Yusuf (2011), Aiyegoro (2012), Adebisi (2012) and Yunusa (2012) have long been interested in reading comprehension instructional strategies: What they are, how they can be incorporated into reading instruction and so on. These strategies range from six-up strategies such as simplifying difficult segments and guessing the meaning of unknown words from the context to more reading comprehension strategies such as summarising, inferring, scanning, skimming, predicting, interpreting, previewing, visual support, comparing and contrasting.

Dole (2000), Adebisi (2012) and Muhammed (2012) observe that most Nigerian teachers engage in "mentioning" the skills the students were supposed to apply instead of teaching them the skills. Onuigbo and Eyisi (2009) practically note that the typical reading lesson in Nigerian schools is always in a situation where students are asked to read silently and answer the author/passage questions. Dorothy (1995) opines that a good teacher must know a number of strategies in order to direct, guide and help learners to become active consumers of information.

Reading teaching methods, according to Taiwo (1991), Dorothy (1991), Adebisi (2012), Muhammed (2012) and Yunusa (2012) can be classified into:

a) Early specialised method of teaching reading, (i.e. those that lay an initial emphasis on elements of words and sounds) which is sub- categorised into three groups namely;

i. alphabetic method

ii. phonic method

iii. echo reading method

i. The alphabetic method: The names of letters are used in the attempt to recognise and pronounce words. These methods are based on the assumption that the teaching of reading should begin with a mastery of the elements of words namely letters. This is because the knowledge of these elements gradually combines into larger language units like syllables, words, phrases, clauses and sentences which enhance or aid comprehension. This method always employs the use of graded exercise, as skill is developed in recognising new words in familiar contexts. The proponents of this method believe that it helps learners to develop accuracy and independence in word recognition and become acquainted with the form and structure of the language.

ii. Phonic method: This is a method of teaching reading where learners learn the names of the letters and the corresponding sounds that they make and then begin to blend sounds to make simple words. This method engages learners in sounding the words and blending the sounds to the extent that they may not learn the meaning of the words that they produce. It is always used to teach the beginning readers.

iii. Echo reading method: In echo reading, the teacher reads a single sentence or phrase at a time and students respond orally repeating or echoing the teacher's statement. The teacher and students read the passage orally. Taiwo (1991) refers to echo reading as paired reading

which he explains as a form of reading teaching whereby the teacher and students sit side by side orally and simultaneously read the target text together. The teacher or students point to the text as it is read to keep the students visual attention on the text. The teacher adjusts his or her volume and rate of reading to the requirements of the students. The teacher may initially take a slight lead in the reading, but with each successive reading during the practice stage, he/she gives more responsibility to students. However, several arguments have been raised against this method which includes:

- it disregards a learner's natural mode of learning by introducing the elements of words at the start.
- reading is taught as a highly specialised procedure which largely depends on a logical consideration
- the subject matter is not related directly to the learner's interest, to other classroom activities or language arts
- both the content and the method are imposed by the teacher and so much attention is paid to word elements and new words neglecting other essential aspects of reading.
- learners fail to acquire an interest in reading for pleasure or information
- learners also develop very slowly, if at all, in word recognition and in ability to read fluently for meaning

b) Recent specialised reading teaching method: This method is sometimes referred to as highly specialised reading teaching method or analytical method. It emphasises meaning from the beginning. It is based on the assumption that meaningful language units (words, phrases and sentences) should be the point of departure. After the recognition of these units as a

whole, attention is directly turned to smaller elements because the extent to which words are analysed varies widely. This method involves psychological process since breaking down of larger units to smaller units is known as analysis methods.

The proponents of this method argue that since reading is a thought-getting process, information should be sought for from the beginning of meaningful materials with emphasis on the development of a thoughtful reading attitude. Thus, reading becomes an interesting, enjoyable and rewarding process and the progress is greatly hastened. This is in line with the view of psychologists that demonstrated that children recognise things and ideas as whole. It may be more or less vague at first, but will gradually proceed to the recognition of details as this procedure follows the natural mode of perceptions.

Methods in this category include:

- i. word method
- ii. phrase method
- iii, sentence method
- iv. story method

i. Word Method: is the presentation of words in a meaningful setting and it is learned largely by the “see and say” method. It is based on the assumption that each word has a characteristic form by which it can be remembered

ii. Phrase Method: is based on the assumption that phrases are more interesting than words and it lays emphases on meaning. At the same time, a good reader recognises groups of words at each fixation of the eyes. This method always fosters rapid growth in efficient reading. However, the validation of this assumption was questioned by Anisudu (2004)

through the analysing of photographic records of eye-movement where he discovered that good readers do not fix their eyes on phrases. Fixation occurs at a more or less regular interval along the lines; the recognition of thought unit, that is, of a group of words that form phrases is a mental not visual process

iii. Sentence Method: represents a third stage in the evolution of analytic methods. It is argued here that the sentence and not the word or letter is the true unit of language. If the sentence is the natural unit in language, it is the natural unit in reading.

iv. Story Method: is more or less an expansion of the sentence method, using a sequence of sentences in the form of a story as the unit of reading instruction. Since a story has a universal appeal to students, this method is always used to ensure learners' keen interest in reading activities. It therefore overcomes some of the disadvantages of the word and sentence method. It also provides a more complete unit of thought than the sentence because it carries the reader through an entire series of events which have a beginning, middle and an end. It emphasises meaning but trains learners to anticipate and follow a sequence of ideas because of its nature. This method provides greater opportunity for discussion and understanding of relationship than the sentences; it also inculcates love for reading.

The recent specialised methods, however, faced a series of criticism that needs much improvement. This therefore paved way for more recent methods. The procedures that formally characterise the word, phrase, sentence and story methods have been modified in many respects and it is impossible to evaluate any of these methods as the best. In fact, most recent methods of teaching reading do not follow any one of them exclusively.

Some weaknesses discovered are:

- so much attention is directed to the development of the attitudes and skills required for getting the meaning of words used in the passage.
 - some teachers fail to use the method properly. For examples, many teachers neglect to develop word recognition skills and others may practically omit training in word recognition on the assumption that learners should acquire necessary knowledge and skills largely through their own unguided development.
- c) The most recent trends in the teaching of reading (Holistic Approach)

Several reading researchers such as Weaver (1995), Fakeye (2002), Adedeji (2005), Ruwa (2005), Thang (2009), Aiyegoro (2012) and NTI (2015) to mention but few highlighted a controversy amongst authorities regarding the teaching of reading. Some subscribe to the code-oriented approach while a host of others subscribe to the meaning-oriented approach. The basic fact is that reading is a highly complex activity requiring a lot of skills, for instance mechanical and intellectual skills on the part of learners which ranged from the recognition of letters and words to the extraction of main ideas and the critical evaluation of texts. Thus, the teaching of the various sub-skills underlines the sub-skill approach while the integration of all the language skills underlines the holistic approach (Weaver, 1995).

The skill model of language teaching and learning is faulted. This is because rather than exposing students to activities that would arouse their thinking, generate original response and make real linguistic choices, mainly skill-oriented activities and text books are focused with exercises of fragmented language segment (Aiyegoro, 2012). It is based on the premise that the needs of the readers are not being met by the highly specialised, sub-skill, and conventional approach that the holistic approach emerged.

The holistic approach was greatly endorsed by a lot of researchers (King, 1992; Harste, 1994) and host of others. The holistic approach is meaning- oriented and is set to facilitate whole learning rather than segmented skills of language. Goodman (1988) explains that the holistic approach accommodates the learner-centred view of the curriculum. This is consistent with Harstes' (1994) view of the holistic approach when he says first language is learned through use,; second, the child is seen as an informant; and third, education is seen as an enquiring process. Weaver (1995) equally observes that in holistic approach classrooms, students are treated as capable and developing not as incapable and deficient as the teacher creates an enabling atmosphere where learners are eager to take risks and grow rather than being afraid to respond for fear of making errors and revealing weaknesses that will subject them to remediation.

The underlining principle here is that the development of the learner is the main purpose of schooling while the mastery of subject matter and the development of the skills are not the chief goals. Since progress in reading is regarded as an important aspect of individual development, the readers' interests, immediate concerns, previous experiences, special aptitudes and deficiencies are given first consideration in the process of teaching and learning. The successful implementation of new method depends upon the teacher's understanding of it as well as upon his/her ability and willingness to depart from the traditional methods.

However, many of its basic principles are exerting a profound influence on the organisational teaching activities in schools. These days, reading is much more closely related to other classroom activities and it is serving more and more as an aid to learning throughout school days. Besides, many of the devises used for an integrated programme are being adopted by teacher's willing to vitalise and improve instruction in reading.

In conclusion, most recent holistic approach to teaching emphasises that language generally should be taught communicatively. Most of the current researches support the active concept of learning which is sometimes called a transactional model, reflecting the fact that the learner actively engages or transacts with the external environment including people and books in order to learn (Adediji, 2005; Aiyegoro, 2012). Thus, learning here is seen as the result of complex cognitive processes that can be facilitated by teachers and enhanced by peer interaction. Some holistic methods of teaching reading include:

- The language Experience Approach (LEA)
- Direct Reading - Thinking Activity (DRTA)
- Experience - Text - Relationship method (ETR)
- Pre- Reading Plan (PREP)
- Basal Reading Approach (BRA)

(i) The Language Experience Approach (LEA): This approach to teaching reading in English as a second language (ESL) class uses the students' own experiences, vocabulary and language patterns to create texts for reading instruction and make reading a meaningful process (NTI, 2015). Typically, the approach involves the use of written record of the learners' experiences, planned cooperatively by the learners and the teacher. Students narrate stories to the teacher or share orally a common experience which would be written down by the students in collaboration with the teacher. These experiences and stories become texts for initial reading instruction. This approach is excellent for creating reading texts for beginning - level ESL students whose command of vocabulary and structures of English is limited (Ruwa, 2005; Thang, 2009; and NTI, 2015).

(ii) Direct Reading - thinking Activity (DRTA) is a group comprehension activity that features prediction of the story events prior to reading: for instance, reading to modify predictions and the use of divergent thinking. This approach is suitable for both fiction and non-fiction. The procedure for DRTA approach goes thus:

- prepare the pre-reading questions before-hand by determining what type of information the passage contains and how it is organised
- develop a set of general questions that will help learners determine what they already know (or think they know) about the topic
- have the class quickly scan the material or topic
- pose your pre-reading questions, encouraging the students to disagree with one another and provide as much specific detail as they can
- jot their guesses on the board, accepting all
- read silently watching for information they had predicted
- after reading have volunteers to point out confirmed predictions
- modify those that were not confirmed and add new information not predicted
- ask more comprehensive questions or follow-up activities

The Advantages of this Approach include:

- learners themselves set reading purposes by making predictions and reading to prove or refute them

- they generally read more activity enthusiastically because they are more interested in finding out what happened
 - they often remember more information, even after much time has passed. One reason for this accomplishment may be their increased curiosity.
- (iii) Experience - Text Relationship Approach (ETR): the basic elements of the ETR method are the discussion of the prescribed text and the procedure for conducting discussion is in three phases. First, the teacher guides students to activate what they know that will help them understand what they read, make predictions and set purposes. This is the experience Phase. Next, he or she reads the story with the students stopping at appropriate points to discuss the story, determine whether their predictions were confirmed and so on. This is the Text Phase. After reading the text, the teacher guides students to their own experiences. This is the Relationship Phase. The teacher facilitates comprehension model processes, and may coach students as they engage in reading and comprehension activities
- (iv) Pre-Reading Plan (PREP)

The purpose of this approach is to diagnose students' prior knowledge and provide necessary background knowledge so as to prepare them for a vivid understanding of the content of the text that they are about to read. The diagnostic instructional procedures include:

- the teacher introduces the key concepts to students using a word, phrase or picture to initiate a discussion

- have students brainstorm about the topic and record their ideas on a chart and help make connections among brainstormed ideas
 - present additional vocabulary and clarify misconceptions
 - have students draw pictures and/or write a quick write-up about the topic using words from the brainstormed lists
 - have students share quick write-up and ask questions to help clarify and elaborate issues. The strength of this approach is that it helps students learn about a concept before starting the lesson.
- (v) Basal Reading Approach (BRA): uses a method of reading instruction which is highly controlled in terms of vocabulary, language expressions / phrases, grammatical structures and levels of reading skills being developed (NTI, 2015). This approach uses commercially published course books which usually consist of the students' course book, workbook or practice book as well as the teacher's handbooks. The textbooks are written and developed in collaboration with specialists in English Language, Language Educators and Language curriculum developers. It is the most widely used method in the teaching of reading in the Nigerian school system and it provides readers with a sequential and controlled programme of reading instruction in areas such as pronunciation, word recognition/distinction, development of vocabulary, comprehension skills and grammatical structures (Yunusa, 2012).

The National Reading Panel (2000) and Adler (2001) similarly identify seven strategies of teaching reading comprehension, which appear to have a firm scientific basis for improving text comprehension. They are:

(1) **Monitoring comprehension:** this involves varieties of instructional techniques for helping students to learn, gauge how well they understand a passage and to apply “fix-up” strategies for correcting comprehension problems. Vaughn, Gersten and Chard (2000) note that the monitoring comprehension strategies are especially helpful for students with learning disabilities. Comprehension monitoring instruction teaches students to:

- be aware of what they understand
- identify what they do not understand
- use appropriate strategies to resolve problems in comprehension

(2) **Cooperative Learning:** this is referred to as “thinking about thinking” approach, good readers use meta-cognitive strategies to think about and have control over their reading. Before reading, they might clarify their purpose for reading and preview the text. During the actual reading they might monitor their understanding by adjusting their reading speed to fit the difficulty of the text and “fixing” any comprehension problem they have after reading, as they check their understanding of what they read.

Students may use several comprehension monitoring strategies in their “thinking about thinking” strategies to solve comprehension problems. Such activities include:

- identifying where the difficulty occurs
- identifying what the difficulty is
- restating the difficult sentence (s) or passage in their own words
- looking back through the text

- looking forward in the text for information that might help to resolve the difficulty
- (3) **Graphic and Semantic Organiser:** Graphic organisers have proven to be useful in helping students visualise relationships among structural elements in a text. Graphic organisers are known by numbers of names which include story maps, concept maps, charts webs, graphs, frame or semantic organiser. Most of the studies reviewed by the National Reading Panel (2000) involved students in upper elementary and middle grades. Evidence also indicates that the use of graphic organisers as a component of a comprehension programme is helpful for those with learning disabilities (Hwa, Vaughn, Wanzek and Weil, 2004). It is also very helpful to young children. According to William (2005), much of the researches on graphic organisers have focused on their use as a tool for helping students understand text structure by focusing on “signal words” or transitional expressions. Graphic organisers illustrate concepts and relationship between concepts in a text using diagrams. It helps readers to focus on concepts and how they are related to other concepts. It basically helps students read and understand textbooks and picture books.
- (4) **Question and Answering:** These techniques encourage readers to answer questions posed by the teacher and learners receive immediate feedback. The teacher can ask questions before, during or after reading and will encourage students’ active participation
- (5) **Answering and Generating Questions:** Many researches on strategy instruction have focused on teaching learners strategies for answering questions or generating questions of their own before, during or after reading. Questions help students to actively engage with a text, check their comprehension and construct memory replacement. Adler (2001) concludes that students at all levels would benefit from

being taught these strategies. Question-generation has proven to be a beneficial strategy for most categories of learners. The answering and generating question strategy is highly effective for teaching reading comprehension because it gives students a purpose for reading; it makes students focus attention on what they are learning. It also helps students to think actively as they read.

The strategy encourages students to indicate whether the information they used to answer the questions about the text was textually explicit information or textually implicit information: for instance information that was implied in the text or information extremely from the students' own background knowledge. (Adebisi, 2012). The National Reading Panel (2000) identifies four different types of questions applicable to reading comprehension; they are:

- “Right there”: these are questions found right in the text; for instance, questions that the answer is directly located in one place in the passage either as a word, group of words or otherwise.
- “Think and search”: these are questions based on the recall of facts that can be found directly in the text. Answers are typically found in more than one place, thereby requiring students to think and search through the passage to find the answer.
- “Author and You”: these questions require students to use what they already know with what they have learned from reading the text. It requires student's thorough understanding of the text and relating it to their prior knowledge before answering the questions.
- “On your Own”: these questions are answered based on experience. Reading the text may not be helpful to them when answering these types of questions.

- (6) Recognising story structure: These strategies typically involve training learners to ask themselves questions about the basic components of stories as they read characters, settings, goals, actions and outcome. The National Reading Panel (2000) found evidence that these techniques improve comprehension and recall of stories, most notably for poor readers. Most learners internalise the basic form of narratives as they read or listen to stories, and are particularly likely to benefit from explicit instruction in the story structure instruction. Students learn to identify the categories of contents (characteristics, settings, events, problems and resolution). Often, students learn to recognise story structure through the use of story-map instruction; the story structure improves student's comprehension.
- (7) Summarising: involves identifying the main idea in a paragraph or having a concise statement of the central concepts from a longer passage, either orally or in writing (Kamil, 2004). Summarisation helps readers to focus on main idea or other key skill concepts that have been taught and to disregard less relevant ones. According to the National Reading Panel (2000), summarising is a complex activity that involves paraphrasing and recognising text information. Summarising requires students to determine what is important in what they are reading and put it in their own words; summarising helps students to:
- identify or generate main ideas
 - connect the main or central ideas
 - eliminate unnecessary information
 - remember what they read

The NPR (2006) further identifies two additional reading strategies, they are: the direct explanation approach and the transactional strategy instruction. The direct explanation approach focuses on the teacher's ability to explain explicitly the reasoning and mental processes involved in successful reading comprehension rather than teach specific strategies. The teacher helps the students to:

- a. view reading as a problem-solving task that necessitates the use of direct thinking and
- b. to learn to think strategically about solving comprehension problems

The transactional strategy instruction on the other hand emphasises the teacher's ability to provide explicit explanations of thinking processes and the teacher's ability to facilitate students' discussion in which they collaborate to form joint interpretations of text. They acquire deeper understanding of the mental and cognitive processes involved in comprehension.

Olajide (2013) also discusses certain comprehension strategies in reading which he refers to as "text attacking skills" which means negotiating meaning by combining proven strategies in the reading process to boost readers' comprehension. The text attacking skills, according to Olajide (2013), include the:

- i. structural attack
- ii. psycholinguistic approach
- iii. socio-cultural approach

The structural attack is the process whereby the reader looks for features that could aid meaning such as determining cause - and - effect, identifying the points of view and details, definition, comparison and contrasting, sequencing, getting the spatial or

geographical cues from the text. The Psycholinguistic Approach can be exemplified in Knight (1993) “SQ5R” reading teaching techniques, an acronym, which the initials stand for Survey (S), Question (Q), Read (R), Recite (R), reflect (R), Record (R) and Review (R). This method is designed to make learners more active and to retain the information gained in a more reliable way. Ajayi (2004) similarly identifies the “KWL” reading method which is an acronym of “know” ‘what” and “learned”. He notes that the three are the main stages of reading, and adhering to them helps in better understanding of the text. The KWL strategy was developed by Carr and Ogole in 1987. It involves probing into learners’ prior knowledge that is, what the students know and what the students learn. The resulting product, most often, is a three-column chart labelled with each category. Ajayi (2004) further explains that the ‘Know’ is the first stage of KWL reading method and it requires the learner to reflect on what he or she knows about the topic and then creates a list which involves brainstorming. The second stage, which is the “what” stage, requires students to identify what they want to know about the topic and lists according to their desire and importance. ‘The learned’ stage which is the final stage enables learners to answer all the present questions and be able to state the added information learnt during the reading process.

Further still, the Socio- cultural approach in reading comprehension deals with learners’ general and specific ways of life. Olajide (2010) emphasises the role of cultural relevant plays in the comprehension of a material because ideas and facts presented in a text are easily linked to learners’ background and makes learning more effective. Awobuluyi (1996) equally concludes that the socio-cultural context of text hindered the comprehension of the text. He explains that most textbooks written by foreign authors might be difficult for Nigerian readers because of cultural inappropriateness as the text might be strange and

unfamiliar to their background and experience, thereby making inferences and prior knowledge usage ineffective.

Basically, strategies of reading are as numerous as reading researchers as one cannot categorically state that one strategy is better than the other since reading is a complex task and its comprehension depends mostly on a series of mechanical, mental, intellectual activities and processes. In spite of the significant role played by reading in the formal information retrieval and the numerous reading teaching strategies, evidence abounds that there have been a progressive decline in the performance of students in public examinations, this calls for more researches on reading strategies and their implementation. This buttresses NRP (2006) reports finding that despite the several reading strategies, some questions remain unanswered. More information is needed on ways to teach teachers how to use such proven comprehension strategies and which strategies are most effective and for which group. Therefore, more research works are necessary to determine whether the techniques applied to all types of text genres and whether the level of difficulty of the texts has an impact on the effectiveness of the strategies. This informed the focus of this study.

Jigsaw Cooperative Instructional Strategy and Students' Academic Achievement

Cooperative instructional strategy is a teaching strategy in which small team, each with students of different levels of ability; uses a variety of learning activities to improve their understanding of a subject. Each member of a team is expected not only to learn what is taught but also help team-mates learn, thus creating an atmosphere of achievement. Cooperative strategy is a covering term for the educational approaches that require an intellectual effort of both teacher and students (as individual or group). Cooperative strategy creates natural, interactive contexts in which students reason with one another, ask questions, clarify issues and restate points of views. Cooperative groups increase opportunity for

students to produce and comprehend learning through modelling and guided practice from their peers.

The educational literature has noted that students can learn from their classmate as they learn from their teacher even better. Learning accomplished through team activities is more beneficial and effective (Ige, 2015). Mahmoud (2015) notes that cooperative learning improves creative and logical thinking of students and helps them solve their problems; it also requires students to diversify learning sources; encourages team reaction and exchange of their experiences; provides students with learning incentives; creates self-confidences and requires them to practise high level of organised thinking skills.

There are several models of cooperative strategy. The models differ in how much structure is provided, method of holding students individually accountable for learning and the use of group competition. These models have been used with many subjects in almost all grades. They include: Scripted Cooperation (SC), Group Investigation (GI), Student Team Achievement Division (STAD), Jigsaw Instructional Strategy (JIS), Cooperative Integrated Reading and Composition (CIRC), Think-Pair-Share (TPS), Reciprocal Teaching (RT) to mention but few.

A number of studies have been conducted on cooperative instructional strategies in general and jigsaw strategy in particular. These studies aimed at realising the effect of these strategies on students' achievement, performance, thinking, motivation and so on, in different study materials and various study stages. Such studies include Ofodu (2009) who conducted a study on the comparative effects of two cooperative instructional methods on reading performance of secondary school students in Ekiti state, Nigeria. The study employed 3x3x2 quasi-experimental design with a sample of 144 JSS III students. The result indicated that Reciprocal Teaching Method (RTM) of cooperative instruction was the most effective

method of teaching reading, which was closely followed by the Think-Pair-Share method (TPSM) while the conventional instructional method (CIM) had the least effect. Mangolio and Xiaoling (2010) experimented jigsaw II strategy in teaching reading comprehension to college English class, integrating the skills of listening, reading, repeating, reciting, retelling and summarising. Their findings show that Jigsaw II strategy was very effective in teaching English as a foreign language (EFL).

Mahmoud (2015) conducted a study on the effectiveness of jigsaw strategy on the achievement of learning motivation of 7th primary grade students in Islamic education using a sample of 53 female students selected from the University schools in Amman, Jordan. The study employed semi-empirical procedure to investigate the effectiveness of the strategy. The findings revealed that jigsaw strategy is effective in promoting motivations which lead to the improvement on students' learning achievement in Islamic studies.

Bilesanmi and Oludipe (2014) conducted a study on the effectiveness of cooperative instructional strategies on Nigerian Junior Secondary Students' academic achievement in basic science. The study employed a quasi-experimental design; specifically pre-test, post-test, delayed post-test, control group design was adopted with a sample of 120 students randomly selected from junior secondary schools in south-west Nigeria. The result showed that students in the two cooperative learning strategies (learning together and jigsaw II) groups had higher immediate and delayed academic achievement mean scores than the students in the conventional instructional method group.

Alebiosu (2001) studied cooperative learning and students' effective learning outcome in chemistry classroom, using two cooperative strategies (Students-Team-Achievement-Divisions (STAD) and jigsaw II). He adopted a pre-test, post test quasi-experimental control group design with 250 senior secondary 2 (SS2) students. The findings

showed that STAD had the highest mean scores in the post-test followed by the Jigsaw 11, and the CIS was the least.

Ajitoni and Salako (2014) researched on the effect of jigsaw technique and gender on students' attitude to ethnic integration and sustainable development in Nigeria. They employed a pre-test, post-test control group quasi-experimental design with a sample of 126 junior secondary students selected from 2 secondary schools in Ogun state, Nigeria. Their findings similarly revealed that jigsaw technique benefited students more than the control group. They identified jigsaw technique as a useful cooperative learning strategy that could be used for promoting national unity through education because it could discourage discrimination and promote mutual respect for other cultures.

Abdullahi (2010) studied the effects of jigsaw II technique on academic achievement and attitudes to written expression course. He discovered that jigsaw was very effective than the conventional teaching technique. Gomleks' (2007) study aimed at enhancing the engineering students' knowledge of English language vocabulary and phonetics. The applied jigsaw method showed positive learning results compared with the conventional instructional strategy. Maden (2011) made a comparison between jigsaw II and conventional method with regard to the written expression skills. He discovered that there was no significant difference between the two methods.

Juweto (2015) studied the effect and gains of using jigsaw cooperative teaching/learning strategy and school location in teaching Biology in secondary school across Nigeria with regard to students' achievement and attitude. The findings showed a significant higher achievement rate of students taught using the jigsaw learning strategy and increasing attitudes and values of learners towards studying biology subject areas; on school location little impact was ascertained.

Maden (2010) researched on the effect of jigsaw IV and the conventional teaching on the academic achievement of Turkish pre-service teachers of language teaching methods and techniques. He employed pre-test, post-test, control group, quasi-experimental design with sample of 62 undergraduate students at the department of Turkish language. The findings showed a considerable difference in favour of the experimental group in terms of academic achievement and retention level in language methods and techniques. He concluded that students have positive attitudes towards jigsaw IV.

Onuche, Eneogu, Asogwe and Ngwuchukwu (2016) conducted a study on the effect of jigsaw on students' achievement in social studies in Nsuka, Nigeria. They adopted a quasi-experimental of non-equivalent design of pre-test, post-test design. They discovered that no significant difference existed in the mean achievement of males and females in Social studies. Their findings indicated that academic achievement did not depend on gender rather in instructional techniques.

Timayi, Bolaji and Kajuru (2015) researched on the effects of jigsaw IV cooperative instructional strategy (J4CIS) on academic performance of secondary school students in Geometry. They employed a quasi-experimental research design involving a pre-test and post-test. 144 senior secondary II (SSII) students were randomly selected from co-education schools in Kaduna state, Nigeria. The findings revealed a significant difference in the performance in favour of the students exposed to the J4CIS. With regard to gender performance, no significance difference was found. It is concluded that J4CIS is gender-friendly and effective in the teaching and learning of Geometry.

Mauludi (2011) conducted a study on the effectiveness of jigsaw techniques to improve students' reading ability in narrative texts. She employed a quantitative approach of experimental design with one experimental and one control group. The study was conducted

on samples of 86,; 11th- grade students of Madrasah Aliyah Negeri in Kendal. Her findings showed a significant difference in students' academic achievement between the experimental group and the control group; the experimental group students' scored higher grades than the control group students.

Generative Instructional Strategy (GIS) and Students' Academic Achievement

Generative instructional strategy was propounded by Wittrock in 1974. It is a learner-centred approach of learning whereby learners construct their own facts, ideas and knowledge through their involvement and participation in different step-by-step activities. It is also through integrating new ideas into their schemata in order to validate initial conception. Mayer and Wittrock (2006) classify the strategy into five groups: elaboration, summary-writing, note-taking, self-explanation and questioning. Question-generation-and-answering is a kind of questioning strategy that requires students to formulate and respond to questions about situations, facts and ideas while engage them in interpreting a text through the teacher's modelling and guided practices.

A number of studies have been conducted on generative instructional strategies in general and question-generation-and-answering in particular. These studies were carried out in different fields of study to test it effectiveness on students' achievement and performance. Such studies include Reid and Morrison (2011) who conducted a study on generative learning strategy and self-regulatory prompting in digital text. They employed a pre-test, post-test, quasi-experimental design with 89 voluntary undergraduate students from several higher education institutions between the ages of 18-55 years, using 2x2 randomised experimental factorial design. Participants were randomly assigned to one of four groups; generative strategy use + self-regulatory prompting (mixed) generative strategy use only (GIS), self-

regulatory prompting only (SPR) and control group. The findings showed a positive outcome for embedding both generative strategy and self-regulatory prompts in digital text.

Adebayo and Bello (2015) researched on generative instructional strategy (GIS) and predict-observe-explain (POE) instructional strategies: Toward enhancing Basic Science practical skills of lower primary school pupils, adopting a pre-test, post-test, control group, quasi-experimental design, using intact class of 3 primary schools from Ondo state, Nigeria. The result of the study showed that there was no significant effect of GIS on primary school pupil basic science practical skills while there was a significant effect of POE instructional strategy on pupils basic science. Also, there was a significant difference in the effect of GIS and POE instructional strategies compared with that of CIS. The study concluded that the POE instructional strategy was a more effective means of improving basic science practical skills of lower primary school pupils.

Sarani and Jabari (2015) conducted a study on the effect of generative strategies on English as a foreign language (EFL) learners' reading comprehension and recall of short stories using three (3) homogenous groups of 63 undergraduate students majoring in English literature at Sabzevar Teacher Training University (STTU) in Iran. The result indicated that the two experimental groups outscored the control group on both tests. The summarisers obtained a higher mean than the question-generation group, who in turn outperformed the control group. The study concluded that summarisation seems to be slightly more effective than question-generation in the enhancement of both reading comprehension achievement and the amount of recalling the content of literary texts by learners of English as a foreign language.

Atsuwe and Anyebe (2016) studied the effect of generative instructional strategy on senior secondary school students' performance in Otukpo local government area of Benue

State. Nigeria. They employed quasi-experimental design, using 824 students from 6 schools in Otukpo. The experimental group was taught Physics using GIS, while the control group was taught Physics as well using the conventional teaching method. Their findings revealed that GIS was effective in enhancing students' academic performance in Physics; also, there was insignificant difference in males' and females' performance.

King (1992) compared self-questioning, summarising and note taking-review as generative strategies for learning from lectures. She employed an experimental design of immediate and delayed post-test. Grouping underprepared college students into three: those trained in questioning -generation-and -answering their own questions based on the lecture, those trained in summarising the lecture content and those in an untrained control group simply reviewing their lecture notes. The results showed that in the immediate post-test scores, summarisers recalled more of the lecture content than the self-questioners, who in turn outperformed note-taking reviewers. On delayed post-test scores, the self-questioners performed somewhat better than the summarisers and significantly better than the note-taking reviewers. The study concluded that for long-term retention of lecture materials, self-questioning tended to be a more effective study strategy than summary writing and note-taking reviewers.

Trespalacios (2008) investigated the effects of two generative learning activities on students' academic achievement of the part-whole representation of rational numbers. He used virtual manipulative third grade students randomly divided into two groups to evaluate the effects of two generative activities; answering-questions and generating-examples. The study employed an experimental design with pre-test, immediate and delayed post-test. A 2x2 mixed ANCOVA, 2x3 mixed ANCOVA and a Bonferroni post-hoc analysis techniques were used to determine any significant differences between the two groups and among the three

tests. The results showed that answering-question strategy had a significantly greater effect than generating- example strategy on immediate post-test scores; no significant interactions were found between the generative strategies on the delayed post-test scores. Also, a difference score analysis between the immediate post-test scores and the delayed post-test scores revealed a significant difference between the answering-question and the generating-example groups. The conclusion of the study was that students who used generating-example strategy tended to remember part-whole representation of rational numbers than the answering-questions strategy groups.

Adebiyi (2012) conducted a research on the effects of explicit and generative instructional strategies on students' achievement in reading comprehension. The study employed a quasi-experimental design specifically pre-test, post-test, non-randomised, non-equivalent control group design was adopted on intact classes of two selected senior secondary school II (SS II) students in Ikere-Ekiti, Nigeria. The findings showed that GIS experimental group outperformed the EIS experimental group, while the CIS group got the least scores. Babajide (2010) researched on the effects of generative and predict-observe-explain instructional strategies as determinants of secondary school students' academic achievement in practical skills in Physics. The findings showed that GIS group scored higher than the POE group while the POE outperformed the CIS group. The study concluded that GIS tended to be more effective in practical skills in Physics than the POE and CIS.

Cook-Howard (2015) researched on questions as generative strategies for knowledge-transfer and problem-solving in interpersonal communication which was delivered as a web-based course. The study assessed the use of domain-specific, domain-general and combined domain-general and domain-specific question types as generative strategies for knowledge transfer and problem-solving in interpersonal communication using experimental design of

pretest, assessment unit and role-play stimulation. An automated agent technique was used to measure transfer and problem-solving. The results of the study showed no significant difference in knowledge transfer and problem solving in interpersonal communication, the treatment group receiving domain-specific questions may produce slightly greater gains in performance over domain-general only and the combined domain-specific and domain-general questions groups.

Ping (2010) investigated the effect of flicker as a generative strategy in enhancing Computer Based Instruction (CBI) of visual recognition and classification using three treatments on pattern recognition, specifically within a pre-test, posttest control group experimental study (The three groups are; a flicker treatment, a no-flicker treatment and a comparison treatment). 228 randomly selected college students were assigned to one of the three groups. The results showed an overall statistically significant difference among the three groups. In the classification test, both flicker and comparison groups performed significantly better than the non-flicker group with small effect sizes. There were no significant differences among the groups in the recognition test.

Ogunleye and Babajide (2011) conducted a research on generative instructional strategy enhancing students' academic achievement in Physics. They discovered that the GIS was more effective than the conventional teaching strategy in Physics, this was probably because learners in GIS classes were in full control in the setting up of the experiment, manipulation of the apparatus, in taking readings, and in plotting graphs. Emily and Zee (2000) researched on analysis of students' generated inquiry discussion. Their study revealed that GIS was effective in the learning of Physics concepts and other science-related topics because the performance of the experimental group (GIS) was significantly different from that of the conventional group.

This study focused Jigsaw IV cooperative instructional strategy (J4CIS) and questions-generation-and-answering strategy (QGAAS) in determining the reading achievement of pre-service teachers in Nigerian Colleges of Education.

Gender and Students' Achievement Level

Gender constitutes one of the variables that influence students' academic performance. It has been an age long struggle that has assumed different dimensions of different ages. It remains relevant in education because it has been linked to the rating of learners' achievement. Idiahe (2011) defines gender as the attributes and opportunities associated with being male or female and the socio-cultural relationship between the two groups. Gender-related opportunities and relationships are socially and culturally constructs and learned through socialisation. According to Hannan (2000), sex roles are biologically determined and may not be changed while gender roles are often mistaken for sex roles. Sallah (2006) observes that the negative stereotype of what roles girls play in society starts as early as they are born and that the sad part is that, this notion is not only held by society and the boys but also by girl-child herself and she grows with it. Subrahmanian (2002) concludes that teachers and curriculum in general reinforce social bias and discriminatory practices against females through the content and method of teaching employed in schools. He discovered that girls in Ethiopia and Guinea spend more time undertaking tasks for teachers as cleaning classrooms and fetching water than educational activities. Aladejana (2002) similarly states that the Nigeria core curriculum for integrated science for junior secondary schools contains more activities that favour boys more than girls.

Estephen and Friends (2001) assert that the widening gap between the average educational achievement of boys and girls has been subject of much discussion. Kolawole (2002) notes that girls perform better in languages than boys. Harper (2001) investigated

gender differences in achievement of boys and girls in schools in New Zealand. The study, which employed a large sample of 5,300 pupils, showed that the achievement of girls in English Language was significantly higher than that of boys both in terms of main curriculum coverage and examination learning outcomes. The result showed that boys achieved significantly better result than girls in Mathematics. Harper (2001) explains that girls and women tend to score higher on verbal tests and nearly always do better than boys and men on coding language tests that call for short term memory and speed. On the other hand, he contends that males achieve higher scores on arithmetic and block design and the visual-spatial test. Akindele and Adegbite (2005) echo the suggestion from linguistic research that in many societies the speech of men and women differs. Adebisi (2012) observes that men's speech is forceful, blunt, efficient, authoritative and serious as opposed to the weak, trivial, ineffectual, tentative, hyper-polite and euphemistic nature of women's mode of communication. Despite these factors, there was no significant difference in the performance of males and females in language tasks. Akinbiyi (2003) affirms that women favour the prestigious or correct way of language use. They easily acquire or learn the standard form of a language more than their men's counterpart. Yunusa (2012) discovers that women use high pitch more than men in their daily communication.

Akindele (1988) observes that males interrupt females and even determine turn-taking procedures. The frequent interruption of females by males demonstrates males' dominance in communication system. Male gains the floor of discussion for themselves through interruption mechanism. Notwithstanding the aforesaid, research findings do not affirm women's inferiority in the area of language acquisition and language learning. Women tend to perform better in quick acquisition of language tools than men because they have greater potentials to move closer to the native speaker of a language in the area of language learning.

The research work of Harper (2001) reflects that women favour the standard, correct and most prestigious form of the language of communication more than men. The findings that men talk longer and dominate the scene of any discussion only demonstrates men's authority, power and complete control of the world affairs. Masculine dominance cannot be demonstrated if language power is not overtaken, and put under their control.

Ofodu (2009) concludes that no significant difference existed in the performance of male and female students in reading comprehension when exposed to Think-Pair-Share and Reciprocal methods. Edward (2004) identifies the differences in language ability rather than language learning and acquisition. There was no empirical evidence as to special favour to any individuals on the ground of gender as regards the language competence and language performance. Harper (2001) observes that the left hemisphere of the brain, which is reserved for language activities in man is more dominant in girls at the age of two and that boys have greater abilities in those functions concentrated in the right hemisphere. This is heavily criticised by Yusuf (2011) that observes that comparable populations of males and females have the same range of test scores, the same range of abilities, and in some test situations the mean or average test scores may not differ at all, or differ by only a few percentage points. This implies that hormonal effects could not be relied upon to conclude that there is a superior stand by either of the genders in language acquisition or language learning.

Ejide's (2001) and Kolawole's (2002) researches revealed the relationship between gender and students' achievement, found that females performed better than males in reading, but there was no significant difference in Mathematics achievement. Ejide (2001) in a study of British students of various ethnic backgrounds (4,607 elementary), (1,225 Secondary) shows that those with early stages of English fluency performed at low level. Bilingual students with English proficiency performed better than English speakers and only borne

ethnic group performed better than others. According to them, regardless of ethnicity, girls appeared to perform better than boys.

Young and Oxford (1997) conducted a study with native English speaking men and women (23 males and 26 females) to examine comprehension and strategies involved in reading two Spanish texts and one English text. No significant differences by gender were reported with recall scores for all text topics, and there were no self-reported differences by gender in the familiarity ratings with passage topics or background knowledge of any of the passage. Jegede (1994) conducted a study of 160 Nigerian secondary school students to determine the influence of achievement, motivation and gender on performance in English language learning. The researcher found that if students are adequately motivated, they are capable of mastering English, gender notwithstanding. However, Yousif (2012) in his work titled “gender differences in reading comprehension performance in relation to content familiarity and gender neutral text” revealed that males outperformed females in reading comprehension.

Brantmeier (2000) reports significant interactions between readers’ gender and gender-oriented passage content with comprehension among intermediate second language learners of Spanish at the University level (29 males and 49 females). The results indicated a significant gender difference. Males scored higher on both tasks via the multiple choices and written recall. This implies that reader’s gender and passage content interact in ways that affect second language reading comprehension with the same participants and reading passages. Gender differences do not account for difference in the strategy used when reading a second language. It may not be linguistic factors (the Spanish language) that impede second language comprehension but rather the unfamiliar content of the text.

Gambrel and Hunter (2000) carried out a research to determine gender differences in literacy in Canadian public schools; in particular, the factors influencing female students' traditional reading proficiency. They discovered that female students surpassed male students in reading. The results of Brantmeier's (2000) study on gender, violence-oriented passage content and second language reading comprehension showed that male and female readers at the advanced levels of instruction indicated that they were equally familiar with the passages. Females outscored their male counterparts on L2 comprehension tasks. The overall findings indicated that females may have an advantage over males in the free written recall procedure.

Tunla (2006) discovered that boys scored better on standardised achievement tests, but girls did better in tests that require writing. Males appeared to do better in Mathematics, Science and Geography than females but females may have the advantage in meeting the social expectations of the school such as behaving in the classroom and producing neat handwritten work. Yusuf (2011) asserts that females scored higher than males in humanity-oriented reading passages but lower than males in science-oriented passages. In a similar vein, Braithwaite (2004) affirms that reading comprehension achievement as measured by recall comprehension was significantly influenced by learner's background knowledge of the passage content and reader's gender.

Akindele (1988), Aladejana (2002), Wang (2003), Braithwaite, (2004), Ukwugwu, (2007), Idighe (2011) and Yusuf (2011) argued that the score gap between males and females on the verbal section of the Scholastic Aptitude Test (SAT) was largely due to the content of reading materials in the test. In their individual studies, they expatiate further that the reading passages on the verbal section of SAT usually cover more technical topics like Physics or chemistry; thus females are at the disadvantage in performing very well in the test.

The research by Moss (2002) that involved the collection of ethnographic data related to the fact of fiction project, a two-year study with the purpose of determining whether a relationship existed between the boy's inclination to fiction and non-fiction literature. The findings of the study resulted in the formation of three categories of readers: those who can and do read freely, those who can but don't read freely and those who can't yet and don't read freely. Moss (2002) discovers that more male students were categorised in the "can't yet/don't" and "can/don't" with more female students classified in the can do category. The research proposes that the reason that boys seemed to perform less proficiently than girls stemmed from their perceptions related to their "status as readers" which involves parents' and teacher's modelling and encouragement in the home and school environment. Moss (2002) additionally states that the result indicated that the reader's public status contributed to gender differences that existed in the amount of time spent in reading the texts. In summary, Moss (2002) affirms that gender differences and reading achievement generally indicated that boys did less well than girls at reading. Therefore, females typically surpassed males on measurements of reading.

In all, understanding how the readers interact with other variables in reading provides a richer and more meaningful explanation of the manner in which gender may influence successful reading comprehension. Reading achievement by males and females depends on many interacting variables such as passage content, parents and teachers' modelling and encouragement and readers' public status. The overall findings indicate that females may have an advantage over males in reading and free written recall procedure. More researches need to be conducted on matters of gender and domain-specific abilities in reading comprehension.

Theoretical framework for the study

The Theoretical Framework for this Study is based on two Educational Theories:

- a. Metacognition Theory
- b. Constructivist Theory

Metacognition theory was propounded by John Flavel in 1976. The theory was influenced by Jean Piaget theory that is why many ideas from Piaget are developed in the metacognition theory. Flavel first used the term “metamemory” in regard to individual’s ability to manage and monitor the input, storage, search and retrieval of the contents of his own memory. He later uses metacognition which he defines as intentional, conscious, foresighted, purposeful and directed at accomplishing a goal or outcome. Although Routhman (1998) and Kolawole (2002) argue that metacognitive processes need not to be operated in a person’s conscious awareness they refer to metacognition as action monitoring and consequent regulation and orchestration of these processes in relation to the cognitive objective or data on which they bear, usually in service of some concrete goals or objectives.

Harper (2001) also gives a more comprehensive definition of metacognition which includes the knowledge of one’s cognitive and affective processes and he further states that it as to do with the ability to consciously and deliberately monitor and regulate those processes. Flavel (1976) identifies three “metas” that children gradually acquire in the context of information storage and retrieval as the child learns:

- (i) to identify situations in which intentional, conscious storage of certain information may be useful and sometime in future.
- (ii) to keep current any information which may be related to active problem - solving and have it ready to retrieve as needed; and

- (iii) how to make deliberate systematic searches for information which may be helpful in solving a problem, even when the need for it has not been foreseen.

Flavel (1979) proposes a formal model of metacognitive monitoring which includes four classes of phenomena and their relationships:

- a. metacognitive knowledge
- b. metacognitive experiences
- c. tasks and goals
- d. strategies or actions

Metacognitive theory is related to the schema theory which places an emphasis on how background knowledge gained is organised into mental units called “schema” and subsequent new information is processed based on how it fits into the already existing ‘schemas’ (Hwa, Vaughn, Wanzek and Wei, 2004). The prior knowledge organised in schemata, in turn, influences the form and content of new knowledge. Also, Ashly (2011) explains that, for learners to effectively process information, their existing schema related to the new content need to be activated. In other words, teachers must take cognisance of the materials they present to students and avoid cultural bias. Most definitions of reading portray the view that reading is a process of constructing a meaning. This refers to metacognition. Metacognitive control refers to the nature of the learner’s decisions and actions during the activity. Inadequate knowledge restricts the extent to which awareness and controls are possible. Many researchers, according to Borokowski and Muthukrishna (1992), have shifted their attention from the theoretical to the practical view of metacognition. They argue that metacognitive theory has considerable potential for aiding teachers as they strive to construct

classroom environments that focus on strategies of learning that are both flexible and creative.

Paris (1991) maintains that students can enhance their learning by becoming aware of their own thinking as they read, write and solve problems in schools. Teachers can promote this awareness directly by informing or teaching learners about effective problem-solving strategies and discussing cognitive and motivational characteristics of thinking.

The relevance of this theory is subsumed in the fact that reading comprehension is a complex act that involves a lot of mental actions that lead to understanding through constructing a meaning from the written text.

The Constructivist Theory

This theory was propounded by Jerome Brunner in (1966) in contrast to Piaget theory. Brunner is one of those who believe that knowledge is not something that can be simply given by the teacher in the front of the classroom to students in their desk, which is mostly used in the conventional classroom. Rather, he believes that knowledge should be constructed by learners through an active and mental process of development as learners are the builders and creators of meaning and knowledge. Anderson and Biddle (1975) also affirm that learning occurs by an active rather than passive construction of meaning. The central idea of constructivist theory is that human learning is constructed, and that learners build new knowledge upon the foundation of previous learning. Lee and Nelson (2005) see constructivism as a theory that emphasises the development of meaning by learners more than the acquisition of a large set of knowledge or skills that are easily forgotten. Twomey (1989) also explains constructivism by making reference to four principles:

- i. learning depends on what we already know

- ii. new ideas occur as we adapt and change our ideas
- iii. learning involves inventing ideas rather than mechanically accumulating facts
- iv. meaningful learning occurs through rethinking old ideas and coming to a new conclusion about new ideas which conflict with our old ideas.

Therefore, a productive constructivism classroom consists of learner-centered, active instruction. In such a class, the teacher provides students with experiences that allow them to hypothesise, predict, manipulate objects, pose questions, research, investigate, imagine and invent. The teacher's role is to facilitate this process. Constructed knowledge is very important in two ways: firstly, learners construct new understanding using what they already know. There is no tabula rasa on which knowledge is achieved rather learners come to learning situation with the knowledge gained from previous experiences, and that prior knowledge influences what new or modified knowledge they will construct from new learning experiences.

Secondly, learning involves an active rather than passive activity/process that learners encounter in the new learning situation. If what learners encounter is inconsistent with their current understanding, their understanding can change to accommodate new experience. Learners remain active throughout this process. They apply current understandings, note relevant elements in new learning experiences, judge the consistency of prior and emerge knowledge based on that judgment, that they (learners) can modify knowledge

Jerome Brunner's principles of constructivist theory are:

- learning begins with issues or ideas that involve the learners in active thinking
- focus on primary concepts as a whole, not in isolation

- learners select and transform information, construct hypotheses and make decisions relying on a cognitive structure (i.e Schema, Mental models)
- providing a meaning and organising it to experiences so as to allow individual learners to go beyond the information given
- instructors should encourage learners to discover principles by themselves by translating information to be learned into a format appropriate to the learners' current state of understanding
- curriculum should be organised in a spiral manner so that students continually build upon what they have already learned.

Brunner (1986) further explains that a theory of instruction should address four aspects:

1. predisposition toward learning
2. the way in which a body of knowledge can be structured so that it can be most readily grasped by learners
3. the most effective sequences in which to present material
4. the nature and pacing of reward and punishments

In conclusion, good theory of structuring knowledge should result in simplifying, generating new propositions and increasing the manipulation of information.

Appraisal of the Literature Reviewed

In this chapter, the literature related to the study was reviewed. From the literature, scholars agreed that students are not performing greatly in English language national

examinations despite its status in the school curriculum. WAEC 2016 Chief Examiner's report revealed the importance of reading to literacy and general realisation of the goals of education, And so did Hwa, Vaughn, Wanzek and Wei, (2004), Ajibola (2006), Idowu (2008) and Olorundare(2009). Scholars also examined various definitions of reading, Ajala (1988), Alabi and Babatunde,(2002), Akinbiyi (2003), Lawal, (2004), Olajide (2009), Adebisi (2012), Yunusa (2012) and NTI (2015). Lawal (2004) established that reading is a mental process, a purposive act, a psycholinguistic guess and a social interaction between the author and the reader. Reading is viewed as a dynamic process that involves linguistic activities, pragmatic process and a metaphysical process, because it originated from God, the creator. Comprehension in reading is seen as the essence and bottom line of reading. Scholars such as Dorothy (1991), Block (2002) Pardo (2004) and Edward (2004) are unanimous in asserting that comprehension is a construct which cannot be directly observed or measured, but a complex intellectual process involving a number of abilities such as inferential reasoning, learning by assimilating new materials to concept already existing, and filtering out facts from numerous written/printed messages.

Meanwhile, reading comprehension is defined variously as a complex process of deciphering the author's intention through interaction with reader's variables, text variables and language variables (Oyetunde and Aboki, 1991; Okwilagwe, 1998; Afolayan & Nwosu, 2001; Scott, 2001; Goff, 2004; Lawal, 2004 and Olajide, 2013). Lee and Nelson (2005), Ofodu (2009), Yunusa (2012), Abdulsalam (2013) and NTI (2015) differently view strategy as activities and techniques employed to generate knowledge and meaning during learning process to achieve a set goal. Olorundare (2009) concludes that reading itself is a strategy for teaching and learning all subjects.

The reviewed literature also revealed that reading strategies are activities carefully planned and arranged in the way that will aid a reader to comprehend any given text in a better way (Yivisaker, 2006; Odia & Omoforwan, 2007). In the same direction, scholars such as Curtis, (2002) and Lawal (2009) emphasised that for reading to be effective, self-confidence and emotional adaptability are essential through employing strategies independently or guided. In addition, the literature revealed that reading strategies vary with the nature of the text, the reader's purpose and the context of the situation (Muhammed, 2012 and Yunusa, 2012).

Dole (2000), Ofodu (2009), Alabi (2012), Gafar (2012), Yunusa (2012), Adebisi (2012) and Olajide (2013) investigated ranges of reading strategies. They discovered that the language variable, the text variable and reader's variables interact to produce comprehensive reading. Adegbite (2003) and Ajibola (2006) observed that Nigerian teachers only mention the skill instead of teaching the skill to students. It was gathered from the literature that Dorothy (1991), Adebisi (2012), Muhammed (2012) and Yunusa (2012) in their independent studies classified reading strategies into three; (i) early specialised methods that lay emphasis on elements of words and sounds (ii) recent/highly/analytical specialised methods of teaching reading and (iii) more recent trends in the teaching of reading which are learner-centred.

The National reading panel (2000) and Adler (2001) in their independent submissions discussed seven strategies for teaching reading comprehension with a firm scientific basis and integrated different earlier discussed strategies for the optimum reading outcome. The strategies are; (i) monitoring comprehension (ii) cooperative learning (iii) graphic and semantic organiser (iv) questioning and answering (v) answering and generating questions (vi) recognising story structure and (vii) summarising. The National Reading Panel (2006)

further identified two additional reading strategies; (i) The Direct explanation approach and (ii) The transactional strategy instruction.

Weaver (1995), Vaughn, Gersten and Chard (2000) and Kamil (2014) elaborated on holistic approach of teaching reading into two categories; Sub-skill approach and the skill model. Olajide (2013) similarly explained the text-attacking skills as a strategy to improve reading comprehension. Text- attacking skill is categorised into: (i) psycholinguistic approach (ii) socio-cultural approach and (iii) structural approach.

Studies revealed that many researchers have worked on jigsaw cooperative instructional strategy: Ige (2004) Gomleks (2007), Abdullahi (2010), Mangolio and Xiaoling (2010), Maden (2010), Maden (2011), Aronson and Patnoes (2011), Maoludi (2011), Bilesami and Oludipe (2014), Ajitoni and Salako (2014) Juweto (2015), Mahamoud (2015), Ige (2015), Timayi, Bolaji and Kajuru (2015), Onuche, Eneaogu, Asogwa and Ngwuchuku (2016). Most of their findings revealed that jigsaw cooperative instructional strategy enhances learning achievement. Timayi, Bolaji and Kajuru (2015) specifically revealed the effectiveness of J4CIS on academic performance of Secondary School Students in Geometry. Mauludi (2011) concludes that jigsaw is highly effective in improving reading ability of students in narrative texts, while Mangolio and Xiaoling (2010) submit that it is very effective in teaching reading comprehension to EFL Students.

The findings on generative instructional strategies (GIS) showed the effectiveness of the strategy in enhancing learning; Barab, Young and Wang (1999), Bonn and Grabowski (2001), Lee, Kyiyi and Barbara (2009) and Babajide (2010) discovered that when students are engaged in generative activities such as note-making underlying, questioning, summarising and so on, they provoke generative thinking that enhances proper learning. Reid and Morrision (2014) discovered that QGAAS improves students reading of digital texts.

Sarani and Jabiri (2015) revealed QGAAS' effectiveness in EFL learners' reading comprehension and recall of short stories while Adebayo and Bello (2015) discovered that POE is more effective than GIS in basic science practical skills. The findings of Babajide (2010) and Atsuwe and Anyebe (2016) showed that GIS enhance students' learning in sciences.

The review on gender showed four positions: researchers such as Gambell and Hunter (2000), Moss (2000), Ejide (2001), Harper (2001), Kolawole (2002), Haywood (2004) and Akindele and Adebgbite (2005) discovered that girls outperformed boys in language task such as speaking, reading and writing. The studies by Brantmeier (2000), Braithwaite (2004), Tunla (2006) and Yusuf (2011) revealed that the passage content determines gender performance, with females scoring higher in humanity-oriented reading passages while males scoring higher in science-oriented passages. Yousif (2012) was the only researcher that claimed that males surpassed females in reading. However, Barnett (1988), Jegede (1994), Harper (2001), Edward (2004), Ofodu (2009) and Ajitoni and Salako (2014) recorded no significant difference in the performance of male and female in language task. Harste (1994), Harper (2001), Kolawole (2002) and Tunla (2006) submitted that boys appeared to surpass girls in Mathematics and Sciences.

In conclusion, researchers are yet to ascertain the gender that surpassed the other in reading comprehension although many researchers discovered that female performed better than males in language and humanities. Some findings negated this outcome because they discovered that the passage content determined performance. Some discovered that male surpassed females in reading. This implies that gender issue calls for further findings in reading. This informed the researcher to examine J4CIS and QGAAS as determinants of

Nigerian Colleges of Education Students' achievement in reading comprehension and to find out the gender that surpasses the other in a reading task using the two strategies.

The theoretical framework for the study is based on two educational theories. The metacognition and the constructivist theory because J4CIS is a cooperative instructional strategy that relates to motivational and cognitive developments while the QGAAS involve self-monitoring and self-correcting generative activities that are based on metacognition and constructivism.

This study was different from the previous studies because it examined J4CIS and QGAAS as determinants of Nigerian colleges of education students' achievement in reading comprehension.

CHAPTER THREE

RESEARCH METHODOLOGY

In this chapter, the procedures and techniques used in carrying out this study are discussed under the following subheadings:

- a. Research Design;
- b. Population, Sample and Sampling Techniques;
- c. Instrumentation;
- d. Procedures for Data Collection and
- e. Data Analysis Techniques

Research Design

The study adopted the quasi-experimental research design. Three experimental groups and one control group were used in the study. The design was adopted because it afforded a

distinctive determination of the main effect of both the independent and moderating variables on students' achievement. It also reveals clearly the interaction between the variables and the testing of several hypotheses (Olurundare, 2009).

A 4x3x3 factorial design was applied in this study. The factorial levels are: the four instructional strategies (jigsaw IV cooperative instructional strategy (J4CIS), question-generation-and-answering strategy (QGAAS), a combination of J4CIS and QGAAS, and the conventional instructional strategy) crossed with achievement levels: high, average, low and poor. The moderating variables were gender, course of study and passage content while three of the four levels of comprehension (literal, inferential and evaluative) are the dependent variables.

These designs are diagrammatically presented below:

Group	Pre-Test	Treatment	Post-Test
E ₁ (J4CIS)	O ₁	X _j	Y ₁
E ₂ (QGAAS)	O ₂	X _g	Y ₂
E ₃ (J4CIS + QGAAS)	O ₃	X _{jg}	Y ₃
C _g (CIS)	O ₄	–	Y ₄

Key E₁, E₂, E₃ = Experimental groups 1, 2 and 3

C_g = Control group

O₁, O₂, O₃, O₄ = Pre-test (J4CIS, QGAAS, J4CIS & QGAAS, and CIS respectively)

X_j, X_g, X_{jg} = Treatment (J4CIS, QGAAS, and J4CIS & QGAAS respectively)

– Placebo=No treatment (CIS)

Y₁, Y₂, Y₃, Y₄ = Post-test (J4CIS, QGAAS, J4CIS & QGAAS, and CIS respectively)

Schematised Factorial Design of 4x3x3

Group	Independent Variables	Moderator Variables	Dependent Variables
	Instructional Strategies	Gender (MIF) Course of study Passage content	3 Reading comprehension levels
1	Jigsaw IV cooperative Instructional Strategies (J4CIS)	Gender (MIF) Course of study Passage Content	Literal Inferential Evaluative
2	Question-generation and answering Strategy (QGAAS)	Gender (MIF) Course of study Passage Content	Literal Inferential Evaluative
3	J4CIS and QGAAS	Gender (MIF) Course of study Passage Content	Literal Inferential Evaluative
4	Placebo (CIS)	Gender (MIF) Course of study Passage Content	Literal Inferential Evaluative

Table 4: Schematised Factorial Design of 4x3x3

Population, Sample and Sampling Techniques

The total population for this study comprised all students of Kwara State Colleges of Education. The target population was all students in the second year (NCE II) of their study at the Kwara State government-owned Colleges of Education. 200 Level (NCE II) was purposively selected to participate in the study because they had already spent one year in the college, they were from the various schools of study (offers different courses), and also they consisted of both male and female students and were preparing for their teaching practice. Both 100 and 300 level students were exempted for the reason being that 100 level students were relatively new and as a result, they may lack the required exposure to learning processes in the college, while 300 level students were preparing for their final year learning activities.

Purposive and simple random sampling techniques were used to select seventy-five (75) students from each College of Education to represent a group; thus the sample for the study was 300 Students. Two experimental groups were drawn from the College of Education, Ilorin, one experimental group from the College of Education, Oro and the control group was drawn from the College of Education (Technical) Lafiagi. However, activities of the two experimental groups in College of Education Ilorin were done simultaneously in order to prevent contamination of instruction.

The Reading Comprehension Achievement Test (RCAT) was used to stratify the students into achievement levels: high, average, low and poor. These helped to ensure that students whose scores are within 35 to 50 were regarded as the high achievers, the average achiever students were those whose scores were within 25 to 34, the low achievers were those that scores within 19 to 24 while the poor achievers are those that scored within 00 to 18marks..

Instrumentation

The basic instruments used for the data collected for this study were the Reading Comprehension Achievement Test (RCAT) and instructional guides on the four strategies.

The RCAT items were adopted from recommended textbooks and were face and content validated by language experts. The RCAT were five-paragraph passages: all the passages contained seven (7) related questions that were generated based on the three levels of comprehension focused in this study.

For the experimental groups, the activities were in three categories: Jigsaw IV cooperative instructional strategy (J4CIS) Group A. Question-generation-and-answering instructional strategy (QGAAS) Group B and the combination of J4CIS and QGAAS Group C. Each of the sessions with the three experimental groups and the control lasted 55minutes and activities for teachers and learners clearly spelt out as attached in the appendices.

The researcher made available the selected passages, writing materials, J4CIS paragraph and passage inquiry sheets, QGAAS activity paper and question-stem for participants to work with. In these papers, columns were provided for them to indicate matriculation number, gender, course of study and level of study. These items made participants to take the exercise seriously; attendance was taken and they were told that the tests could form part of their continuous assessment in the use of English course (GNS 221). The provided paper yielded data for other variables of the study. The control group were treated to placebo.

Mangolio and Xiaoling's (2010) jigsaw cooperative instructional strategy framework was employed for experimental Group A, while Look (2011) question-generation-and-

answering strategy framework was employed for experimental group B. However, the combination of J4CIS and QGAAS was employed for Group C.

Essentially, the RCAT was designed to determine the effects of J4CIS and QGAAS on the reading achievement of the college of education students at the literal, inferential and evaluative levels of comprehension. The RCAT contained seven (7) questions; three (3) questions were based on the literal comprehension level, two (2) on inferential and two (2) on evaluative. Seven (7) marks each were allotted to each correct answer, and thus the total marks obtainable for pretest was 49marks and post-test was also 49marks an additional 1mark was added across board on the two tests, making a total of 50 marks. The following marking guides were used for the grading of the test:

Content comprehension = 1.5 Marks

Organisation of ideas = 1.5 Marks

Expression = 3 Marks

Grammatical accuracy = 1 Mark

Total $7 \times 7 = 49 + 1 = 50$ Marks obtained were interpreted as follows:

35 - 50 = High

25 - 34 = Average

19 - 24 = Low

00 - 18 = Poor

The tests were administered twice: the scores obtained before exposing the students to the strategies constituted the pre-test scores, while those at the end of the treatment were the

post-test scores. Both the experimental and control groups attempted the pretest and post-test respectively.

To ensure the face and content validity of the RCAT, the passages were adopted from recommended English language textbooks. It was also subjected to the opinions and suggestions of experienced English language lecturers from College of Education Oro and Ilorin respectively and also to some Test and Measurement experts from the University of Ilorin. The expertise attention of the researcher's supervisor and those of some lecturers in the department of Arts Education, University of Ilorin, were sought, their contributions, observations and amendments were effected before the administration of the trial testing of the instrument.

The instrument was subjected to a co-efficient reliability test at the Osun State College of Education Ila-Orangun where no experimental subjects were selected. There, it was administered on 30, NCE11 Students in a two weeks test re-test interval. The data obtained were analysed using Pearson's Movement Correlation and a value of 0.773 was obtained which showed that the instruments were reliable.

Procedure for Data Collection

Prior to the administration of the experiment, the researcher visited the authorities of the three colleges to discuss her intention of the experimental work. The researcher sought for their consent and support to carry out the experiment. The researcher predetermined that 300 students would be involved in the research. There were seventy-five (75) participants from each college selected through simple random and purposive sampling methods.

Purposive sampling technique was employed because the participants were drawn from chosen programmes. With the introductory letter and kind cooperation from the College

authorities, the seventy-five students were selected to participate in the experiment. This therefore, means that in each college seventy-five participants existed. In the College of Education Ilorin, one hundred and fifty participants were selected. The distribution was done as reported below:

- (a) College of Education Oro; 75 participants labelled as experimental group A
- (b) College of Education (Technical) Lafiagi; 75 participants were selected as control group
- (c) College of Education Ilorin; 150 participants were selected and they were divided using simple random sampling technique into experimental group B and C respectively.

There were six research assistants hired and paid for their participations in the research. As the research assistants were experts in English language, their training took only one (1) week. These research assistants were trained on the necessary pedagogical techniques for implementing the research strategies. The experiment lasted for four weeks in each of the Colleges. Different strategies were used in teaching the four selected groups but exposed to the same content and same sets of pre-test and post-test treatment. The required experimental strategies were used in College of Education Ilorin to avoid contamination of instruction of the instructional techniques during the pre-test and post-test administration.

The researcher based the questions of the tests on the literal, inferential and evaluative levels of comprehension.

Treatments for the experimental groups consisted of the following:

Experimental group A: (J4CIS) the treatment for this group lasted for 55 minutes per session. This session continued for a period of four weeks, two periods per week. The class

was heterogeneously divided into groups with five members each; each group was divided according to the number of paragraphs in the passage. The groups were referred to as “home groups”; each student was assigned to a paragraph and was given a specific task in the paragraph. Each student was given a J4CIS paragraph inquiry sheet to respond to the specification task. Later, students were directed to form homogeneous groups known as “expert groups”. Members of this group consisted of students assigned to the same paragraph; they met and deliberated on their specific tasks, made corrections and modifications, and attend to the researcher’s quiz, then filled the J4CIS inquiry sheet together and returned to their different “home groups” as experts then taught their assigned paragraph (turn-teaching). Each member was now an expert in his/her own task. Each member then taught his/her own paragraph to the home group and the group filled the J4CIS passage inquiry sheet together that was presented to the entire class.

Experimental group B: (QGAAS) the treatment for this group lasted for 55 minutes per session. This session lasted for a period of four weeks, two periods per week. In QGAAS class, students sat in normal conventional classroom setting. The researcher introduced the passage by creating a questioning environment to make the reading meaningful and purposeful through the passage title. She distributed the selected passage and asked students to read silently bearing in mind the introductory questions; she explained the strategy to them and informed them that they will generate and answer questions from the passage content. Students were asked to choose a partner and assign role to themselves (important ideas finder and detailer); then re-read the passage and discuss the important ideas and the supportive details. Students then returned to their conventional seat and attended to the QGAAS activity paper individually through the teacher modelling and guidance. They generated and answer questions, some students presented their formulated questions to the class, and others

corrected the identified mistakes through the teacher's guidance and the provided question-stem.

Experimental group C: (J4CIS & QGAAS) the treatment for this group was a combination of J4CIS & QGAASS. Students were given the typed passage, the J4CIS PPIS, and QGAAS activity paper to respond to questions. Students were firstly grouped into heterogeneous (home groups) later to homogeneous (expert groups) and back to their original heterogeneous group as experts to partake in the Jigsaw cooperative instructional activities; they later generated and responded to the questions using the QGAAS activity paper and the question stem,

Control group D; (CIS) the conventional instructional strategy was used for this group. This group did not respond to any treatment rather than the normal lecture method which was used to teach the students. In CIS class, the researcher distributed the typed passage paper, read the passage to the students, asked for difficult words and explained the mentioned difficult words on the chalkboard. The instructor then asked students to individually read the passage silently, re-read the passage to the students and directed them to individually attend to the follow-up assignment questions, and then he/she corrected students' mistakes where necessary.

Data Analysis Techniques

Percentage analysis was used to analyse the demographic data, seven research questions were raised in the course of the study. Research Questions **a** and **b** were answered using percentage while other Research Questions with corresponding hypotheses were tested using Analysis of covariance (ANCOVA) at 0.05 level of significance. Fajemidagba (1995) explains that ANCOVA is appropriate in testing hypotheses on the effect of more than two

independent variables. In addition, Scheffe Post-hoc analysis was used to determine where the difference lied in participants' achievements.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS

This chapter presents the analysis of the data collected and the findings based on the research questions and hypotheses postulated in the study. Research Questions **a** and **b** were answered using percentage. Other research questions with corresponding hypotheses were tested using Analysis of Covariance (ANCOVA) at 0.05 level of significance. Post-hoc analysis using Scheffe was used to determine where the difference lies in participants' achievement.

Demographic Description of Data

Percentage was used to describe personal characteristics of the participants as illustrated in Tables 5

Table 5: Demographical Variables of Participants

Distributions	Frequency	Percentages %
Gender		
Male	138	46
Female	162	54
Total	300	100
Groups		
Control	75	25
J4CIS	75	25
QGAAS	75	25
J4CIS & QGAAS	75	25
Total	300	100
Course of study		
ECCE/PES/LANGUAGES	100	33.3
Vocations/Technology	100	33.3
Sciences	100	33.3
Total	300	100
Passage Content		
Familiar	150	50
Unfamiliar	150	50
Total	300	300

In the variable of gender, the table shows that out of 300 students that participated in the study, 138 (46%) were males while the rest 162 (54%) were females. In the variable of groups, the table reveals that out of 300 students that participated in the study, each of the group has equal numbers of participants (75) which implies 25% for each of the four groups. In the variable of course of study, the table indicates that each of the three schools of study was represented by 100 students each. This implies that each school is represented by 33.3%. In the variable of passage content, the table shows that 150 (50%) participants were exposed to familiar content passages and 150 (50%) were also exposed to unfamiliar content passages.

Answering Research Questions

Research Question a: What is the general entry achievement level of college of education students in reading comprehension?

Table 6: General Entry Achievement Level of College of Education Students in Reading Comprehension

Groups	Scores Range	Frequency	Percentages %	Decision
Control	35-50	--	--	High
	25-34	--	--	Average
	19-24	40	53.33	Low
	00-18	35	46.67	Poor
Total	00-50	75	100	--
QGAAS	35-50	--	--	High
	25-34	--	--	Average
	19-24	29	38.67	Low
	00-18	46	61.33	Poor
Total	00-50	75	100	--
J4CIS	35-50	--	--	High
	25-34	--	--	Average
	19-24	28	37.33	Low
	00-18	47	62.67	Poor
Total	00-50	75	100	--
J4CIS & QGAAS	35-50	--	--	High
	25-34	--	--	Average
	19-24	26	34.67	Low
	00-18	49	65.33	Poor
Total	00-50	75	100	--

Table 6 reveals that none of the groups (experimental and control) obtained higher grade (25-50marks) before the treatment. The CIS obtained the highest percentage of low reading achievers with 53.33%; it was followed by QGAAS with 38.67%; then the J4CIS with 37.33% while a combination of J4CIS and QGAAS took the least with 34.67%.

In addition, a combination of J4CIS and QGAAS group has the highest poor reading achievers with 65.67%; it was followed by J4CIS with 62.67%; the QGAAS also followed with 61.33% and the least was the CIS with 46.67%. This implies that the general entry achievement level of College of Education Students in reading comprehension is very low.

Research Question b: What is the reading achievement of Nigerian Colleges of Education Students in control, J4CIS, QGAAS and a combination of J4CIS and QGAAS?

Table 7: General Students' Reading Achievement in Control, J4CIS, QGAAS and J4CIS & QGAAS

Groups	Scores range	Frequency	Percentage %	Decisions
Control	35-50	5	6.7	High
	25-34	43	57.3	Average
	19-24	25	33.3	Low
	00-18	2	2.7	Poor
Total	00-50	75	100.0	--
QGAAS	35-50	64	85.3	High
	25-34	8	10.7	Average
	19-24	1	1.3	Low
	00-18	2	2.7	Poor
Total	00-50	75	100.0	--
J4CIS	35-50	41	54.7	High
	25-34	29	38.7	Average
	19-24	4	5.3	Low
	00-18	1	1.3	Poor
Total	00-50	75	100.0	--
J4CIS and QGAAS	35-50	70	93.3	High
	19-24	5	6.7	Average
	00-18	--	--	Low
	39-00	--	--	Poor
Total	00-50	75	100.0	--

Table 7 reveals that a combination of J4CIS and QGAAS group obtained the highest percentage of high achievers with 93.3%; it is followed by QGAAS with 85.3%; the J4CIS has 54.7% and the least is the control group with 6.7%. The control group has the highest average reading achievers of 57.3% followed by J4CIS with 38.7%, the QGAAS has 10.7% while the least is a combination of J4CIS and QGAAS with 6.7%. The control group also has the highest low achievers with 33.3% followed by J4CIS with 5.3%; the QGAAS also followed with 1.3%. None of the students in the combination of J4CIS and QGAAS fall into the low grade category. The control group and the QGAAS group took the lead in the poor reading achievement with 2.7% each. The J4CIS group was the last with 1.3%. None of the students that participated in the combination of J4CIS and QGAAS fall into the poor achievers category. This implies that the control group scores the lowest scores followed by J4CIS, then the QGAAS and a combination of J4CIS and QGAAS group score the highest grades.

Hypotheses Testing

Five hypotheses were postulated in the course of this study. All the hypotheses were tested using Analysis of Covariance (ANCOVA) at 0.05 level of significance.

Hypothesis One (H_{01})

There is no significant effect of J4CIS, QGAAS and a combination of J4CIS and QGAAS on the reading achievement of College of Education Students

Table 8: Effect of J4CIS, QGAAS and a Combination of J4CIS and QGAAS on the Reading Achievement of College of Education Students

Source	Type III sum of squares	df.	Mean square	Cal. F-value	Sig.	Decision
Corrected model	14568.704	4	3642.176	94.276	.000	
Intercept	9189.287	1	9189.287	237.863	.000	
Pretest	2425.599	1	2425.599	62.781	.000	
Groups	10448.183	3	3482.728	90.149	.000	H ₀₁ Rejected
Error	11396.641	295	38.633			
Total	1152782.000	300				
Corrected total	25965.347	299				

a.R squared=.56 (adjusted R squared=.555) level of sig 0.05

Table 8 indicates that the calculated F-value is 90.15 with 3/299 degree of freedom computed at 0.05 level of significance. Since the calculated level of significance (0.000) is less than the critical level of significance (0.05), The researcher on the basis of the finding, reject the null hypothesis and retained hypothesis 1 (H₀₁). This implies that there is a significant effect of J4CIS, QGAAS and a combination of J4CIS and QGAAS on the reading achievement of the college of education students. This is in favour of a combination of J4CIS and QGAAS with the mean score of 67.25 greater than the mean scores of QGAAS (66.16), J4CIS (55.55) and the control group (51.19). To ascertain where the significant difference lies in participants achievement; Scheffe Post-hoc test was carried out. The output reveals thus:

Table 9: Scheffe Post-hoc Analysis of the Significant Difference of J4CIS, QGAAS and a Combination of J4CIS and QGAAS in the Reading Achievement of the College of Education Students

Groups	N	Subset alpha=0.05			
		1	2	3	4
Control	75	51.1867			
J4CIS	75		55.5467		
QGAAS	75			60.1600	
J4CIS & QGAAS	75				67.2533
Sig.		1.000	1.000	1.000	1.000

Table 9 shows that students in a combination of J4CIS and QGAAS group performed better than all other groups with the mean score of 67.25 in Subset 4. It is followed by QGAAS with the mean score of 60.160 in Subset 3. The third category is J4CIS with the mean Score of 55.55 in Subset 2 while the least is the control group with the mean score of 51.19 in Subset 1.

Hypothesis Two (H₀₂)

H₀₂: There is no significant effect of J4CIS, QGAAS and a combination of J4CIS and QGAAS on the Reading Achievement of the College of Education Students at the literal, inferential and evaluative levels of comprehension

Table 10: Effect of J4CIS, QGAAS and a combination of J4CIS and QGAAS on the Reading Achievement of the College of Education Students at the Literal, Inferential and Evaluative Levels of Comprehension

Level of Compre.	Source	Type III sum of square	df	Mean square	Cal. F-value	Sig	Decision
Literal	Corrected Model	2962.869	4	740.717	298.526	.000	
	Intercept	376.945	1	1376.945	554.941	.000	
	Pretest	1.899	1	1.899	.765	.382	
	Groups	2931.332	3	977.111	393.798	.000	H ₀₂ Rejected
	Error	731.968	295	2.481			
	Total	72491.000	300				
	Corrected Total	3694.837	299				
Inferential	Corrected Model	1593.298	4	398.325	504.421	.000	
	Intercept	599.048	1	599.048	758.608	.000	
	Pretest	2.941	1	2.941	3.725	.055	
	Groups	1570.330	3	523.443	662.865	.000	H ₀₂ Rejected
	Error	232.952	295	.790			
	Total	29763.000	300				
	Corrected Total	1826.250	299				
Evaluative	Corrected model	1246.543	4	311.636	230.984	.000	
	Intercept	386.079	1	386.079	286.161	.000	
	Pretest	.743	1	.743	.551	.459	
	Groups	1244.004	3	414.668	307.351	.000	H ₀₂ Rejected
	Error	398.004	295	1.349			
	Total	24282.000	300				
	Corrected total	1644.547	299				

Table 10 shows the analysis of the literal, inferential and evaluative levels of comprehension exhibited by the participants in J4CIS, QGAAS and a Combination of the two; at the literal comprehension level it shows that the calculated F-value is 393.798 with

3/299 degree of freedom and computed at 0.05 level of significance. It further indicates that at the inferential level, the calculated F-value is 662.865 with 3/299 degree of freedom and computed at 0.05 level of significance. And at the evaluative level of comprehension the calculated F-value is 307.351 with 3/299 degree of freedom and computed at 0.05 level of significance. Since the calculated level of significance (0.000) in each of the three levels is less than the critical level of significance (0.005), hypothesis 2 is thereby rejected. This implies that there is a significant effects of J4CIS, QGAAS and a combination J4CIS and QGAAS on the reading achievement of the College of Education Students at the literal, inferential and evaluative level of comprehension.

To ascertain where the significant differences lies; scheffe post-hoc test was carried out. The output reveals thus:

Table 11: Scheffe Post-hoc Analysis of the Significant Difference of J4CIS, QGAAA and a Combination of J4CIS and QGAAS in the Reading Achievement of the College of Education Students at the Literal, Inferential and Evaluative levels of Comprehension

Level of Compre.	Groups	N	Subset for alpha = 0.05			
			1	2	3	4
Literal	Control	75	11.3333			
	J4CIS	75		13.0933		
	QGAAS	75			16.7333	
	J4CIS&QGAAS	75				19.4133
	Sig.		1.000	1.000	1.000	1.000
Inferential	Control	75	6.8533			
	J4CIS	75		8.0267		
	QGAAS	75			11.1600	
	J4CIS&QGAAS	75				12.5600
	Sig.		1.000	1.000	1.000	1.000
Evaluative	Control	75	6.2933			
	J4CIS	75		7.8133		
	QGAAS	75			8.7733	
	J4CIS&QGAAS	75				11.8667
	Sig.		1.000	1.000	1.000	1.000

Table 11 shows that the students in a combination of J4CIS and QGAAS group performed better than other groups with the mean score of 19.41, 12.56 and 11.88 in subset 4. It is followed by QGAAS with the mean score of 16.73 11.16 and 8.77 in subset 3. The third category is J4CIS with the mean score of 13.09, 8.27 and 7.81 in subset 2 while the least is the control group with the mean score of 11.33, 6.85 and 6.85 in subset 1.

Hypothesis Three (H₀₃)

There is no significance effect of gender on J4CIS, QGAAS and a combination of J4CIS and QGAAS on the reading achievement of College of Education Students.

Table 12: Effect of Gender on J4CIS, QGAAS and a Combination of J4CIS and QGAAS on the Reading Achievement of the College of Education Students

Source	Type III sum of squares	df	Mean square	Cal. F-value	Sig	Decision
Corrected model	4163.720	2	2081.860	28.361	.000	
Intercept	7532.019	1	7532.019	102.608	.000	
Pretest	4137.218	1	4137.218	56.361	.000	
Gender	43.197	1	43.197	0.588	.444	H ₀₂ Retained
Error	21801.582	297	73.406			
Total	1152782.000	300				
Corrected Total	25965.347	299				

a. R squared = .160 (adjusted R squared = .155 level of significance 0.05)

Table 12 reveals that the calculated F-value is 0.59 with 1/299 degree of freedom and computed at 0.05 level of significance. Since the calculated level of significance (0.44) is greater than the critical level of significance (0.05). Hence, hypothesis 2 is retained. This implies that there is no significant effect of gender on J4CIS, QGAAS and a combination of J4CIS and QGAAS in the reading achievement of the college of education students.

Hypothesis Four (H₀₄)

There is no significant effect of student's course of study on J4CIS, QGAAS and a combination of J4CIS and QGAAS on the reading achievement of College of Education Students.

Table 13: Effect of Student's Course of Study on J4CIS, QGAAS and a Combination of J4CIS and QGAAS on the Reading Achievement of the College of Education Students

Source	Type III sum of squares	df	Mean square	Cal. F-value	Sig.	Decision
Corrected model	4134.960	3	1378.320	18.689	.000	
Intercept	7553.068	1	7553.068	102.413	.000	
Pretest	4109.472	1	4109.472	55.721	.000	
Course	14.436	2	7.218	0.098	.907	H ₀₃ Retained
Error	21830.296	296	73.751			
Total	1152782.000	300				
Corrected Total	25965.347	299				

a. R squared = .159 (Adjusted R squared = .151)

Table 13 indicates that the calculated F-value is 0.10 with 2/299 degree of freedom and computed at 0.05 level of significance. Since the 0.91 is greater than the critical level of significance (0.05) therefore, Hypothesis 3 is retained. This implies that there is no significant effect of student's course of study on J4CIS, QGAAS and a combination of J4CIS and QGAAS on the reading achievement of the college of education students.

Hypothesis Five (H₀₅)

There is no significant effect of passage content (familiar or unfamiliar) on J4CIS, QGAAS and a combination of J4CIS and QGAAS on the reading achievement of College of Education Students.

Table 14: Effect of Passage Content (familiar or unfamiliar) on J4CIS, QGAAS and a Combination of J4CIS and QGAAS on the Reading Achievement of the College of Education Students.

Source	Type III sum of squares	df	Mean square	Cal. F-value	Sig.	Decision
Corrected model	4200.544	2	2100.272	28.660	.000	
Intercept	6372.335	1	6372.335	86.956	.000	
Pretest	4090.467	1	4090.467	55.818	.000	
Content	812.844	1	812.844	11.092	.000	H ₀₄ Rejected
Error	21764.754	297	73.282			
Total	1152782.000	300				
Corrected Total	25965.347	299				

a.R squared=.162 (adjusted R squared=.156)

Table 14 indicates that the calculated F-value is 11.09 with 1/299 degree of freedom and computed at 0.05 level of significance. Since the calculated level of significance (0.000) is less than the critical level of significance (0.05) Hypothesis 4 is thus rejected. This implies that there is a significant effect of passage content (familiar or unfamiliar) on J4CIS, QGAAS and a combination of J4CIS and QGAAS on the reading achievement of the college of education students. This is in favour of familiar content passages with the mean score of 61.41 greater than the unfamiliar content passages with the mean score of 58.18.

Summary of the Major Findings

The findings of the study were that:

- vii. before the treatments, most college of education students can read but a few comprehend effectively with low and poor grades (control; 53.30%, QGAAS; 38.67%,

J4CIS;37.33%, combination;34.67%, and Poor(control; 46.67%, QGAAS; 61.33%, J4CIS; 62.67%, combination; 63.35%)

- viii. a significant difference exists in the reading achievement of college of education students taught with J4CIS, QGAAS and a combination of the two ($F=90.15$; $P=0.00<0.05 =H_{01}$ rejected) in favour of J4CIS+QGAAS;
- ix. a significant difference exist in the reading achievement of college of education students taught with J4CIS,QGAAS and a combination of the two at the literal, inferential and evaluative levels of comprehension (Literal; $F=393.798$; $P=0.000<0.05=H_{02}$ rejected.Inferential; $F=662.865$; $P=0.00 <0.05= H_{02}$ rejected. Evaluative; $F=307.305$; $P= 0.00<0.05= H_{02}$ rejected)
- x. gender does not have any significant influence on the reading achievement of college of education students when exposed to J4CIS, QGAAS and a combination of the two ($F= 0.59$; $P = 0.44>0.05) = H_{02}$ retained;
- xi. course of study does not have any significant influence on the reading achievement of college of education students when exposed to J4CIS, QGAAS and J4CIS+QGAAS ($F=0.10$; $P= 0.91> 0.05) = H_{03}$ retained; and
- xii. passage content had a significant influence on the reading achievement of college of education students when exposed to J4CIS, QGAAS and J4CIS+QGAAS,in favour of familiar content($F=11.09$; $P=0.00<0.05)=H_{04}$ rejected

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Discussion of Findings

The focus of this study was to examine Jigsaw IV cooperative instructional strategy (J4CIS) and Question-generation-and-answering strategy (QGAAS) in determining the reading achievement of the College of Education Students. The main idea was to find out whether the use of J4CIS or QGAAS or a combination of J4CIS and QGAAS would enhance students' reading comprehension at the literal, inferential and evaluative levels.

This chapter therefore discusses the results of the analyses obtained in Chapter Four of the study. Conclusions were drawn from the findings and recommendations were made to relevant interest groups, so that appropriate policies could be put in place in order to make reading more beneficial to the colleges of education students. Suggestions were also proffered for further studies.

General Entry Achievement Level of College of Education Students in Reading Comprehension

The analysis of the data collected on the general entry achievement level of College of Education Students in reading comprehension reveals that students have a problem of effective comprehension of reading texts. This is because all participants in the study involved in the pre-test recorded low and poor results.

The finding confirms the position of Ofodu (2009) that conventional strategy results in rote learning and students are passive recipients, non-thinking readers instead of being thoughtful readers. The finding is also similar to Adenipekun's (2016) submission that

students' low performance in examination could be attributed to candidates' misinterpretation of questions and errors traceable to them in the course of registration or as a result of lack of comprehension of instruction.

The finding is also in agreement with the assertion by NTI (2015) that reading is a highly complex activity requiring a lot of skills and most students perform poorly in examination due to inadequate instructional attention. The result of the study further supports the finding of Alabi (2013) who ascertained that reading and comprehension are complementary concepts and thus reflect in the way they are used together like inseparable parts of a coin because if one is not reading one is not comprehending. The finding therefore suggests that most College Students can read but few comprehend effectively.

General Students' Reading Achievement in Control, J4CIS, QGAAS and a Combination of J4CIS and QGAAS

The analysis of the data collected on the general reading achievement of the college of education students in Control, J4CIS, QGAAS and a combination of J4CIS and QGAAS reveals that the students exposed to the three experimental groups (J4CIS, QGAAS and a combination of the two) performed better than those in the conventional instructional strategy (CIS). With a combination of J4CIS and QGAAS performing higher than the others with the mean score of 93.3% followed by QGAAS (85.3%), then J4CIS (54.7%) while the CIS took the least (6.7%). The better performance of the experimental groups could be attributed to students' active participation in the reading process occasioned by the strategies. J4CIS, a cooperative strategy, is designed basically to engage students in team teaching and expose them to instructional packages that easily facilitate learning. This is in agreement with Aluko's (2004) views that cooperative strategies are highly effective in learning because it makes a teacher engage learners in a variety of instructional packages that encourage

students' development of critical thinking, problem-solving and performance skills. The result also supports Abdullahi's (2010) assertion that cooperative strategy creates natural interactive contexts in which students reason with one another, ask questions, clarify issues and re-state point of view, thereby enhancing students' opportunity to comprehend learning.

On the other hand, QGAAS, as a generative strategy, is a learner-centered approach that Aiyegoro (2012) observes to facilitate learning. He notes that students become self-regulated readers and thinkers when they take active roles in the reading process; they recognise and resolve their own discrepancies with text. This is in consonance with Trespalacious' (2008) assertion that question-generation assists students to process the piece of information retrieved from their memories on a particular concept, explained and modified by learners themselves. Such a practice allows an individualised form of learning and empowers them with the ability to express their personal view. The finding also confirms the opinion of Barab, Young and Wang (1999) that knowledge generation process creates relations between new information and learner's prior-knowledge through self-regulation which is achieved by behaviourally and motivationally active learners' participation in their own learning process. In addition, the finding agrees with Ijaya's (2000) submission that the skills to develop in learners are the skills of reasoning or reflection, adaptability and innovativeness. Based on these submissions, it can be inferred that the two strategies (J4CIS and QGAAS) are effective strategies for teaching reading comprehension.

Effect of J4CIS, QGAAS and a Combination of J4CIS and QGAAS on the Reading Achievement of the College of Education Students at the Literal, Inferential and Evaluative Levels of Comprehension

The analysis of data shows a significant difference in the reading achievement of the college of education students exposed to J4CIS, QGAAS and a combination of J4CIS and QGAAS at the literal, inferential and evaluative levels of comprehension. The three experimental groups performed better than those in the conventional instructional strategy (CIS). In favour of a combination of J4CIS and QGAAS followed by QGAAS and then J4CIS on college of education students' achievement in reading comprehension. The higher achievement could be attributed to active learners' involvement in the reading process occasioned by the team involvement in J4CIS and pair involvement in QGAAS. The finding is in tandem with that of Ige (2015) who observes that learning accomplished through team activities is more beneficial and effective than other forms. Mahmoud (2015) also notes that cooperative learning improves the creative and logical thinking abilities of students and helps them solve their learning problem because it requires them to diversify learning sources, encourage team reaction and exchange of experiences, provide students with learning incentives and create self-confidence that requires them to practise high level of organised thinking skills.

The seeming higher achievement of students exposed to a combination of J4CIS and QGAAS could also be linked with the submission of Wittrock (1991) that learners should not be passive recipients of information but active participants in learning process, working to construct meaningful understanding of the information found in the environment which requires learners to generate either organisational or integrated relationship and construct personal meaning. This is as a result of the process of generating relations between memory

which includes preconception of abstract knowledge, everyday experience, human specific knowledge and new information. The difference that manifested in this finding might be an indication that students' attention and interest were aroused and sustained because the strategies involve students' interaction and conversations between pairs in QGAAS and among teams in J4CIS. The results of the study also support the findings of Babajide (2010) who ascertained that involving students in generation activities enhances learners' knowledge generation by creating relationship between new information and the prior knowledge. According to him, this practice often results in the acquisition of new knowledge and the reconstruction of existing ideas into their schemata. The finding also affirms Mahmoud's (2015) submission that students' active involvement in learning promotes motivation, which leads to their improvement on learning achievement. Manqolio and Xioling (2010) affirm that jigsaw classroom reduces students' reluctance and anxiety to participate in turn-teaching and group discussion. Aronson and Patnoes (2011) similarly conclude that jigsaw classroom does not only increase students' self-esteem and self-confidence but also improve their liking for school and their enthusiasm about learning. These reasons may induce the better performance in the jigsaw IV group. The finding is in agreement with Mauludi's (2011) submission that a significant difference existed in the performance of students in reading ability in narrative texts upon exposure to jigsaw techniques more than those taught with the CIS

The finding however contradicts Maden's (2011) submission that no significant difference existed in the achievement of students exposed to jigsaw and those that were not exposed to it in written expression courses. This may point to the fact that writing is a productive skill and reading a receptive skill though both are literacy skills.

Also, the finding does not agree with Serani and Jabari's (2015) discovery that summary-writing is more effective than question-generation in the enhancement of both reading comprehension achievement and the amount of reading content of literary text by English as foreign language (EFL) learners. It also contradicts Trespalacios' (2008) study that concludes that students who used generating-examples strategy tend to remember part-whole representation of rational numbers more than the answering-questions strategy group. The finding does not support Cook-howard's (2015) outcome that no significant difference existed in the performance of students using domain-specific, domain-general and a combination of domain-general and domain-specific question types for knowledge transfer and problem-solving in interpersonal communication. These findings point to the fact that more studies are needed in this area.

The analysis of data further revealed a significant difference at inferential level of comprehension, this was closely followed by literal and the last was the evaluative level. The higher achievement could be linked with Ofodu's (2009) observation that an inferential level of comprehension of learners is enhanced during the thinking process, as they draw from their background experience and prior knowledge of the passage content which assist them in a thorough interpretation of the text content. NICHD (2000) also notes that QGAAS assists learners to link background knowledge to their prior knowledge, make predications and draw inference. Babajide (2010) similarly affirms that QGAAS makes learners become initiators, responsible communicators and manipulators of ideas which empowered them to test the fitness of their generated knowledge with others to either construct or re- modify their initial conceptions. Adebisi (2012) also notes that QGAAS enables learners to formulate and answer literal, inferential and evaluative questions because it requires learners to think through the information provided in the text and also share the passage content with a self-

chosen friend (pair), thereby making learning more comprehensive. The finding is similar to King's (1992) conclusion that for long term retention of lecture materials, self-questioning is more effective than summary-writing and note-taking reviewers. Therefore, the finding suggests that these strategies, if properly practiced in schools can enhance learners reading achievement at the literal, inferential and evaluative levels of comprehension.

Effect of Gender on J4CIS, QGAAS and a Combination of J4CIS and QGAAS on the Reading Achievement of the College of Education Students

It was gathered from the findings that there was no significant difference between the reading achievement of the college of education male and female students exposed to J4CIS, QGAAS and a combination of J4CIS and QGAAS. The finding is similar to that of Mauludi (2011) who discovered that no significant difference existed in the mean achievement of male and female students' reading ability in narrative texts upon exposure to jigsaw instructional strategy. Ofodu (2009) similarly discovered that gender had no significant effect on the performance of students in reading comprehension when exposed to think-pair-share method and reciprocal-teaching cooperative method. The result also supports those of Young and Oxford (1997); their finding reveal that no significant difference by gender was reported with the recall scores for all text topics of native English speaking men and women' comprehension and strategies involved in reading two Spanish texts and one English texts. The finding is also similar to Jegede's (1997) submission that no significant difference existed in the performance of male and female Nigerian secondary school students in English language learning. He found that if students are adequately motivated, they are capable of mastering English language; gender difference is not significant.

Maden's (2010) finding also reveals a similar outcome with the current study that no significant difference was recorded in the performance of male and female Turkish pre-

service teachers of language teaching methods and techniques when exposed to jigsaw instructional strategy. Adebiyi (2012) similarly reveals that no significant difference existed in the reading achievement of secondary school students upon exposure to explicit and generative instructional strategies. Edward's (2004) study also shows similar submission: he identified that there was no empirical evidence as to special favour to any individual on ground of gender as regards language competence and performance. In the same vein, Yusuf's (2011) study shows that no significant difference existed in the performance of male and female students in language task. He observes that both male and female students have the same range of test scores, the same range of abilities, and in some test situations the mean scores may not differ at all or differ by only few percentage points.

The finding contradicts those of Akindele (1988), Gambrel and Hunter (2000), Ejide (2001), Harper (2001), Kolawole (2002), Moss (2002) and Akinbiyi (2003) who independently discovered that females outperformed males in various language tasks. For instance, Akindele (1988), Harper (2001) and Akinbiyi (2003) differently discovered that women reflect the favoured, standard, correct and the most prestigious forms English language in communication than men. Gambrel and Hunter (2000) found that female students surpassed their male counterparts in reading while Ejide's (2001) and Kolawole's (2002) researches reveal that female students performed better than males in reading but no significant difference existed in male and female students' achievement in Mathematics. Moss (2002) discovered that readers' public status contributes to gender differences that existed in the amount of time spent in reading text; he concluded that females spent more time in reading and they typically surpassed males in measurement of reading. On the contrary, Yousif's (2012) research reveals that males outperformed females in reading comprehension. The differences in the submissions showed that researches on gender are

inconclusive. Thus, this finding suggests that the strategies (J4CIS and QGAAS) are gender-friendly and are consistent for both male and female students with the same measure of instructional advantage because they can be used to arouse and sustain the interest of learners and would lead to improving their learning achievement regardless of gender.

Effect of Student's Course of Study on J4CIS, QGAAS and a Combination of J4CIS and QGAAS on the Reading Achievement of the College of Education Students

The analysis of data shows non-significant effect of student's course of study on J4CIS, QGAAS and a combination of J4CIS and QGAAS on the reading achievement of the college of education students. This finding confirms that of Lee, Kyiyi and Barbara (2009) that students may not fully understand sentences constructed by their teacher: it is highly likely that they understand sentences that they generated by themselves regardless of their field of study. Moss (2002) similarly affirms that reading comprehension can be achieved by reader's perception of reading which directly involves parent and teacher modelling and encouragement in the home and school environment but does not have to do with the learner's field of study. The finding also supports Grabowski's (2004) view, that reading achievement is fostered by the adequate motivation of students and arousing students' interest rather than on students' specialisation. The finding therefore suggests the consistency of the strategies on all categories of students irrespective of their fields of study.

Effect of Passage Content on J4CIS, QGAAS and a Combination of J4CIS and QGAAS on the Reading Achievement of the College of Education Students

It was gathered from the result of this study that there was a significant effect of passage content (familiar or unfamiliar) on J4CIS, QGAAS and a combination of J4CIS and QGAAS on the reading achievement of the college of education students. Students performed better in familiar content passages than the unfamiliar content passages in the three experimental groups and the control group. The finding is similar to the submission of scholars such as Awobuluyi (1996), Brantmier (2000), Braithwaite (2004), Tunla (2006), Yusuf (2011) and Olajide (2013). For instance, Brantmier (2000) attributed reading comprehension and recall of memory to interaction between reader's gender and passage content. According to the scholar, males scored higher in violence-oriented passages while females scored higher in humanity-oriented passages. Yusuf (2011) equally discovered that females scored higher than males in science-oriented passages. Tunla (2006) similarly found that passage content affects learner's performance; he affirms that males tended to perform better in science and war-oriented passages while females seemed to perform better in love and humanity-oriented passages. These submissions suggest that gender interacts with passage content to determine learner's achievement in reading comprehension.

The finding also corroborates Braithwaite's (2004) result that reading comprehension achievement as measured by recall comprehension was significantly influenced by learners' background knowledge of the passage content. The result also supports Olajide's (2013) view that emphasises the role of cultural relevance of passage content to reading comprehension. He affirms further that ideas and facts presented in text could be easily linked to learners' background and thus would make learning more effective. The finding is in agreement with Awobuluyi's (1996) conclusion that the socio-cultural context of text determines its

comprehension. According to him, if passage content is strange and unfamiliar to reader's background knowledge and experience, it makes drawing inferences and prior knowledge usage to be ineffective. This finding suggests that a familiar content passage enhances students' reading comprehension because it makes drawing inferences and prior knowledge usage more effective.

Conclusions

This study examined jigsaw 1V cooperative instructional strategy (J4CIS) and question-generation-and-answering instructional strategy (QGAAS) as determinants of Nigerian Colleges of Education Students' achievement in reading comprehension. Findings from this study have established that a combination of jigsaw 1V cooperative instructional strategy and question-generation-and-answering instructional strategy has positively enhanced the reading achievement of the college of education students at the literal, inferential and evaluative levels of comprehension. Also that question-generation-and-answering, a generative strategy is more effective than jigsaw 1V; a cooperative strategy in teaching reading.

The study also found that gender had no significant effect on the four strategies (J4CIS, QGAAS, and J4CIS+QGAAS) in reading comprehension. In addition, the finding reveals that student's course of study had no significant effect on the four strategies in reading comprehension. Another finding further reveals that passage content (familiar or unfamiliar) had a significant effect on the four strategies in reading comprehension. Students seem to perform better in familiar content passages than unfamiliar content passages.

The study shows that three of the four levels of reading comprehension (literal, inferential and evaluative) focused in this study can be informed by instructional strategy

exposed to students in teaching reading comprehension. However, QGAAS was more effective in inferential level of comprehension than the J4CIS. The pedagogical implication of these findings is that teachers should teach reading comprehension cooperatively and generatively because these strategies teaches reading communicatively by integrating all the language skills which arouses and sustain learners interest and improve learning achievement.

Recommendations

The findings from this study could be beneficial to teachers, pre-service teachers, policy makers, curriculum planners, authors and publishers and further researchers. Based on the findings of this study, the following recommendations are made.

Teachers

Considering teachers as the real implementers of the country's educational policy, aims and curriculum goals, teachers could employ J4CIS, QGAAS and a combination of J4CIS and QGAAS to facilitate reading instruction in class and to improve students' reading comprehension levels. This is because reading is essential in formal information retrieval and it is a crucial literacy skill. Teachers should accommodate team grouping, turn-teaching and pair-teaching among students. They should be allowed to interact with one another, discuss with pairs on reading task and create enabling environment for self-questioning formation and self-answering while the teacher models and guides their learning. All these would lead to building students' self-esteem and self-confidence, which would motivate and arouse their interest and would eventually lead to easy acquisition of knowledge for present and future use (referential purpose). It is further recommended that teachers should keep themselves abreast of current teaching approaches and strategies; they should endeavour to develop themselves through private reading, be internet compliant; regularly attend workshops, seminars and

conferences and they should also present papers at seminars and conferences so as to equip themselves, improve their teaching and assist learners to develop intellectually.

Pre-service Teachers

Ajiton (2008) refers to teacher education as the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behaviour and skills they require to perform their tasks effectively in the classroom, school and wider community. Among the institutions where prospective teachers are trained in Nigeria are colleges of education, faculties of education in the universities, national teachers' institute and so on. These institutions need to modify their training programme by re-orientating their students to embrace learner-centred approach of teaching and also acquaint their students with current research findings in education, especially on instructional strategies.

Policy Makers

Researches have shown that no nation can rise above the quality of her educated citizens. Thus, it suggests that for any nation to develop, appropriate attention towards the growth and development of education is imperative. In view of this, the policy makers should focus on the growth of education by building more lecture halls to accommodate learner-centred approaches of learning. They should also equip the buildings by providing sufficient learning resources like tables, chairs, writing materials and so on, in order to encourage team and pair grouping and create conducive environment for cooperative and generative learning

Curriculum Planners

It is recommended that curriculum planners should work hand-in-hand with university authorities in order to gain access to current researches. They should periodically review and

include new findings, especially on instructional strategies in the curriculum, and this practice would to a large extent improve the teaching and learning process.

Authors/publishers

There are numerous textbooks on reading and a great sign of improvement has been recorded over years. Yet, authors should try to create sections that would include strategies appropriate for teaching the language skills written in textbooks. This practice would accommodate cooperative and generative models and this could facilitate reading comprehension. Publishers should constantly review textbooks before publication; and encourage writers to consider reading strategies that is effective for text comprehension of readers when writing. That is, they should put the readers in focus.

Further Researchers

It is recommended that this study would provide useful empirical evidence in instructional strategies for educational researchers.

Limitations of the Study

The study was not able to cover all colleges of education in the country; it only covered Kwara State government-established colleges of education. The study was not extended to Federal colleges of education and individual or association/private owned colleges of education. The study was also limited because it could not make institutional assessment such as comparing data of subjects from Colleges of Education, Polytechnics and Universities. The study looked into the variables of gender, course of study and passage content, it could not extend to learner's home variables, teachers variables and school variables. The study also examined three of the four levels of comprehension; it could not

extend to the fourth level. The uncovered areas might as well reveal informative and beneficial outcomes.

Suggestions for Further Studies

This study was on cooperative and generative instructional strategies as determinants of Nigerian Colleges of Education Students' achievement in reading comprehension at the literal, inferential and evaluative levels of comprehension. The study specifically examined jigsaw 1V (as a cooperative strategy) and question-generation-and-answering (as a generative strategy). Future researchers can direct further studies on:

- a). Effect of other generative strategy models such as generating-examples, note-taking, elaboration, summary-writing, self-explanation and other forms of questioning on teaching reading comprehension.
- b). Effect of other model of cooperative strategy such as scripted-cooperation, group-investigation, student-team-achievement–division, team-accelerated-instruction, cooperative-integrated-reading-and composition, team-games-tournament and other forms of jigsaw on teaching reading comprehension.
- c). Influence of home background variables, school variables and readers variables on reading comprehension (at the creative level) using other cooperative or/ and generative models.
- d). Influence of reading ability level of readers on other cooperative or/and other generative models.
- e). Findings on gender as a variable in educational researches is inconclusive; gender effect on reading comprehension using other models of cooperative or/and generative strategy.

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APPENDICES

APPENDIX 1

Passage one

William Wallis (Enemies Everywhere)

WE HAD FALLEN ASLEEP under a mango tree watching the dawn rise over the river Congo. The long grass whispering in a breeze, as the river lumbered by in golden light, had provided an irresistible lullaby. The soldiers on frontier duty were too busy receiving rations to find us a worry and we were too seduced by the larger picture to find them threatening. But recruits from the presidential guard who swing by on patrol saw in the `admittedly unusual sight of two white men sleeping on the river banks, the making of a subversive mission to destroy Laurent Kabilas first anniversary in power. It was hopeless to explain that we were just two friends profiting from the quiet of dawn to prepare for the stress of another Kinshasa day. We were labeled suspect an excuse for unlimited prison terms in president Kabilas Congo and carted off in an army pick up.

It used to be, in the latter days of the former Mobutu regime, that if a soldier barked at you, you could bark back or growl the name of a general five times out often he would withdraw. If not, a bank note would usually send him off in search of other prey. But something less predictable had got hold of Kinshasa. It had become impossible to tell if the gun in your face was just for show. Often man with the gun saw a conspiracy in your helpful smile and felt inclined to blow it away. The tolerance and humour which always seemed to characterize life under Mobutu rule even at the toughest time had evaporated. And so it was that we two journalists short of a story got an exclusive tour of one of the more sinister

detention centers that had sprung up in the mansions deserted last year when Mobutu and his henchmen fled a successful bid to end their rule.

Once a luxury apartment block belonging to Mobutu's uncle "Litho", the building now housed an assortment of security services and prisoners ranging from simple suspects to ministers fallen from favour and aid workers deemed spies. Outside there was a rabble of men in track suits armed with pistols, red eyed teenage soldiers and sharp suited officials with the glint of sadists. From under closed doors, the smell of torture and deprivation seeped out. And there was the inevitable interrogation: a humorless young man probing every aspect of our dawn excursion and the lives that led up to it. Luckily, he decided he had other more important detainees to deal with and let us leave, equipped with a new impression of how things were falling apart. The scene, we decided, smacked more of a regime in its death throes than year old administration of a president who had overthrown his predecessor to almost universal applause. Instead of building on consensus, they were recruiting misfits to beat the people into line. Where a problem emerged, their answer was to lock up its perceived author. Sooner or later, things were going to explode. Now they have.

Several of president Kabilas senior aides told me how, in the late stages of their rebellion, a debate had raged over the relative merits of marching on Kinshasa and seeing off Mobutu, or holding back in the territory they had already won with ease. From Lubumbashi in the south, some advised, they could have negotiated a more solid political entry into the troublesome capital than the military one they ultimately chose, we were afraid, Kinshasa which had a reputation as vipers nest of political squabbles and corruption, could unravel our alliance, said one of them. Their fears were well founded. Once in Kinshasa, it proved impossible to combine the interest of a nation on the bread line with those of regional backers such as the Rwandans, who were perceived by the local population as having expansionist

designs. Fractious politicians, with irreconcilable agendas, added to a growing sense of paranoia. And if you imagine enemies everywhere, eventually they become real. It is a symbolic blow to president Kabila that a man he imprisoned for holding a news conference, emerged as one of the leaders of a new revolt.

When Z'Ahidi Ngoma was shown on state television after being captured following a prison escape last year, the Congolese were truly shocked. The new government was not only failing to distinguish itself from its predecessor, but it was brazen enough to display the evidence: former law professor was manacled, close to starving and showed visible signs of having been tortured. It was another public relations disaster in a country thirsty for freedom. I have often wondered whether Kabila decided it was easier to copy Mobutu than to create a new style of leadership. The personality cult, the repression and corruption, the juggling of image as emperor none of it seemed to have changed. And now, the same consequences. It is almost surreal to be watching what Kabila did when I first arrived in Kinshasa two years ago, to hear the same Rwandan denials of involvement and to witness the same xenophobic government inspired witch hunts. It is a time to settle scores and there are enough of them to ensure that the dream of a rosy dawn for Congo remains just that.

Source: The use of English and communication skills (GST 101) NTI course material p.156-158.

Follow-up Assignment

(Passage one): **J4CIS Paragraph Inquiry Sheet**

Passage Title: Enemies Everywhere

Question	Paragraph A	Paragraph B	Paragraph C	Paragraph D	Paragraph E
I	What ceremony are they preparing for?	What is the profession of the narrator and his friend?	Why where the narrator and his friend released?	What fear does the ruling party have? Why?	Relate the narrated characteristic of the Congo leader with any Nigeria leader
II	What is the main idea of the paragraph?	Compare Mobutu and Kabila's regime as stated in the paragraph	How does the narrator describe the detention camp in the paragraph?	What is the bone of contention of the paragraph?	Were the Congolese able to realize their dream of a rosy dawn? Why?

(Passage one): A Sample of J4CIS Paragraph Inquiry Sheet

Student's Matriculation No.....

Course Combination:

Sex:

Title: Enemies Everywhere

Paragraph "A" (Home group) Specification Task.

(I) What ceremony are they preparing for?

.....

(II) What is the main idea of the paragraph?

.....

Answer the following questions (pre-test questions)

Student's Matriculation No.....

Course Combination:

Level of study:

Sex:

Questions	Passage Title: Enemies Everywhere
I	Suggest a suitable title for the passage apart from the author's title
II	What is the occupation of the narrator and his friend?
III	Why were the narrator and his friend carted off in an army pick up?
IV	What is the bone of contention of the passage?
V	 Compare Mobutu and Kabila's regime as implied in the passage
VI	 What Celebration are they preparing for?
VII	

	Briefly outline the important ideas of the passage
--	--

J4CIS Passage Inquiry Sheet

Post-test questions

Student's Matriculation No.....

Course Combination

Level of Study

Sex

Questions	Passage Title: Enemies Everywhere
I	Do you agree with the title of the passage? If yes, State your reasons
II	What is the narrator and his friend's profession?
III	
IV	What celebration are they preparing for?
V	Why were they (the narrator and his friend) detained?
VI	
VII	What is the main idea of the passage?
	
	Compare Mobutu and Kabila's regime as implied in the passage
	Summarize the passage into five sentences
	a.

	b. c. d. e.
--	--

Passage two

Over-population

A country is said to be over-populated if the economic resource base and the existing methods of production (i.e. Technology) cannot support the population. In this case, a reduction in population will result in a higher income per head. The over-population concept does not depend on sheer density, but ability of the economy to support the people, consequently, a country like Ghana with a small density of population (3 persons per square mile) appears to be more over-populated than Britain with a density of about 600 persons per square mile, the problems of over -population, general poverty, diseases, malnutrition, problems of food supply, pressing demand for housing, hospitals, schools, unemployment, e.t.c. are more felt in Ghana than in Britain. But the land areas of the two countries are almost the same and resources in Ghana are adequate for even a larger population. The problem lies with methods of production. The present methods of production are not developed enough to support the existing population.

A nation consumes part of her production and saves a fraction of it for capital formulation and investment. It is the investment which goes to increase the national output, if it is economically made - the smaller the investment, the smaller the growth that will be expected in the national output. Overpopulation is one of the factors that militate against the nation`s ability to generate enough capital so as to invest and grow. In the first place, it creates the pressure to consume the entire national product and leaves nothing or too little for investment. The vicious circle of poverty sets in from this low capital formation, low investment, low production, low savings etc. Furthermore, the labour does not get adequate training and works with too little capital because of the other burning problems of the government which do not enable her to provide enough

facilities for the purpose. With the low technology and unskilled nature of labour, productivity is low. Consequently, local production being inadequate has to be supplemented with imports of consumer goods at the expense of capital formation. Since local production is low, exports are low and in the face of such high imports, balance of payments problems arise.

The pressure may be so great as even to force the government to obtain foreign loans, which go mostly to the importation of consumer goods. The payment of such 'unproductive' loan further weakens the nation's ability to form capital. The pressure on the government to provide such amenities like schools, hospitals, pipe-borne water, electricity, etc. results in continuously increasing recurrent expenditure while the proportion going into capital formation continuously declines. Unemployment becomes an alarming problem and provision for them in the form of transfer earnings eats into capital formation. Mass movements into the urban centres are common features of over population. The rural life becomes unbearably poor. Consequently, the youths, especially, try to escape this. The result is further fall in food production and the effect is felt in the form of high food prices in the urban centres. Every commodity becomes affected because of the resultant trade union agitations for high wages which raise the cost of production, and the ultimate effect is renounced on the rural folk also, in the form of high prices of manufactured goods.

The inability of the government to meet the people's pressing demand often results in political instability which disrupts economic planning and scares away foreign investors. The solutions to these problems lie in mass production side by side with population control. The mass production can be achieved by either raising loans for capital formation or asking the people to make further sacrifices by cutting down

consumption in order to form capital. From such a chaotic background, raising foreign loans for development is more desirable because it does not require much sacrifices and It will give a quick start in the economic development. However, the economic development will slow down when the time comes for the repayment of the loan and the interest.

The other alternative (i.e. developing from one's own resources by sacrificing immediate consumer goods for capital formation) seems to be better because it can ensure a steady growth population control must go side by side with the above measures to lighten the pressure on consumer goods, family planning, immigration restrictions or even a policy like the aliens compliance order are all measures that can be adopted. The investment must be efficiently directed and carried out. It must be in areas that can stimulate the economy, e.g. transportation, agriculture, power development, technical education, etc. The Land Tenure System must be changed to allow for easier acquisition of land for production. Other social vices like laziness, lateness, absenteeism, etc. must give way to hard work and dedication, for a rise in the productivity of labour.

Source; Comprehension of written passages in the use of English in higher education
pages 34-36 (UNILORIN)

Follow-up Assignment / J4CIS PIS

Passage Two J4CIS Paragraph inquiry Sheet

Passage Title: Over - Population

Question	Paragraph A	Paragraph B	Paragraph C	Paragraph D	Paragraph E
(I)	List five problems posed by overpopulation as stated in the paragraph	Briefly explain the following: 1)capital formation 11)capital investment	What do you understand by unproductive loan?	State what causes the slowdown of the economic development of a nation as stated in the paragraph	What remedy does the paragraph proffer to ensure a nation steady growth?
(II)	Why does Ghana with a small density of population appear to be more over-populated than Britain with larger density of population?	How does over-population affect the nation's ability to generate enough capital for investment and growth?	List five problems faced by a nation that is over populated as stated in the paragraph	What is political instability?	How could a country control her population?

A Sample of J4CIS Paragraph inquiry sheet

Student's Matriculation No.....

Course Combination

Level of Study

Sex

Passage Title: Over-Population

QUESTIONS	Paragraph A (Home group A) Specification task
(i)	List five problems posed by overpopulation as stated in the paragraph (a) _____ (b)_____ (c) _____ (d)_____ (e)_____
(ii)	Ghana with a small density of population appears to be more over-populated than Britain with larger density of population.why? _____ _____ _____

Student's Matriculation No.....

Course Combination:

Level of Study:

Sex:

Pre-Test Questions (Passage 2)

(I) A country with a higher income per head is said to be

(II) What is the effect of obtaining foreign loan in an overpopulated nation?
.....

(III) Mention five problems posed by overpopulation in the passage

- a)
- b)
- c)
- d)
- e)

(IV) What causes political instability?

(V) What five remedies does the passage proffer to ensure a steady growth in an over-populated nation?

- a)
- b)
- c)
- d)
- e)

(VI) Outline five important ideas expressed in the passage:

- a)
- b)
- c)
- d)
- e)

(VII) Does over-population depend on sheer density? Exemplify from the passage.
.....

Student's Matriculation No

Course Combination:

Level of Study:

Sex:

Follow-up Assignment/J4CIS Passage Inquiry Sheet (Post-test questions)

Question	Passage Title: Over-Population (Post-Test Questions)
I	Define over-population according to the passage.....
II	Why is obtaining foreign loan referred to as unproductive loan in the passage?
III	List five problems faced by a nation that is over-populated a) b) c) d) e)
IV	What is political instability?
V	Mention five suggested measures to overcome a risk in the production of labour a) b) c) d) e)
VI	Ghana with small density of population appears to be more over-populated than Britain with large density of population, why?
VII	Briefly summarize the passage into five sentences a) b) c) d) e)

Passage three

Cardiovascular diseases

Read the passage bellow carefully and attempt the questions after it

People who eat more than two or more servings of red meat such as beef, pork and lamb a day or take lots of diet carbonated drinks are much more likely to develop conditions leading to heart disease and diabetes, U S researchers have warned. According to the researchers, eating two or more servings of meat a day or even excessive consumption of diet soda increases the risk of suffering from a cluster of risk factors known as metabolic syndrome, which includes excessive fat around the waist, high cholesterol, high blood sugar and high blood pressure by 25percent, compared to those who take two servings of meat a week. Researchers from Boston University School of medicine said people who drank more than one diet soda each day developed the same risk for heart disease as those who take sugar regular soda in another large but inconclusive study.

In the study reported in an earlier edition of the journal, the researchers found that even no-calorie sweet drink increase the craving for more sweets, and that people who indulge in sodas probably have less healthy diet overall. Drlyn Steffen, an associate professor of epidemiology at the University of Minnesota and his team came to this conclusion after the examined diet of 9,514 people in a study funded by the U.S National Heart, Lung group. The volunteers were categorized into two groups: those with a ‘western-pattern’ diet, heavy on processed meat, and a ‘prudent pattern’ diet with more fruits and vegetables, with small amount of fish and poultry. They found after nine years

of following them up, that nearly 40 percent of those involved in this study developed three or more risk factors linked to metabolic syndrome. This was clear even when smoking and exercise were factored in.

One of the authors of this study published in the journal of circulation, Dr. Steffen, in a comment, said though it was surprising to find that diet soda promoted the risk for heart problems, the study adds to a body of evidence linking fast food with an unhealthy lifestyle. She explained that when other behavioural patterns are considered, it may be associated with compensating for higher calorie food. People may say, 'I can't eat this cookie because I am drinking this diet soda'. Moreover, heart experts have said that many of the key risks for cardiovascular diseases (heart attack and stroke) are influenced by what you eat. While risk factors like age, gender and ethnicity cannot be changed, simple changes to eating habits can combat raised blood pressure and high cholesterol level that is instrumental in many cardiovascular episodes.

Dr. Ranti Familoni, a consultant cardiologist at the Olabisi Onabanjo University, Teaching Hospital, Shagamu, Ogun state said eating too much of red meat is not good for the heart because of its cholesterol content. 'We know that meat and poultry generally have more cholesterol content than fish and cholesterol is the agent that blocks the arteries of the heart, causing stroke. If you take more of meat rather than fish, your blood cholesterol level goes up. It is solely for this reason we tell people that as they grow older, they should eat more fish than meat. If you have to take meat, we advise you take lean meat of fish than meat.' He also described as untrue the belief that red meat is better for consumption than either internal organs of the animals, like the intestines and the cow's skin referred to as 'ponmo'. People must not take 'ponmo' because, like the inner organs of animals such as the liver, it has a high level of cholesterol. It is for the same

reason that people are advised to remove the skin of chicken and turkey when eating them because they are rich in cholesterol (fat).

Professor Tola Atinmo, a nutritionist from the Department of Human Nutrition, University of Ibadan, said eating red meat is not only synonymous with heart problems alone but also gout. Gout is a type of arthritis that results from too much of uric acid in the body. Often, the excess uric crystals are deposited in the joints causing pain, swelling and tenderness in the area affected, such as the big toe, the ankle, knee, foot, wrist and elbow. According to him, ‘consumption of red meat in particular may lead to a high production of uric, leading to gout and affecting other parts of the body like the ankle nerves’. Prof. Atinmo said that there is no doubt that eating appropriate diet is good for healthy life and can even prolong one’s life. He said it is a good thing to have a habit of avoiding red meat, though it is not an easy thing to follow because red meat is, of course, tastier and more delicious.

Source: The use of English for higher Education pages 107-108 UNILORIN

J4CIS Paragraph Inquiry Sheet (Passage Three)

Title: Cardiovascular Diseases

Question	Paragraph A	Paragraph B	Paragraph C	Paragraph D	Paragraph E
I	The U.S researchers have warned that:	Briefly state the findings of researchers from Boston University School of Medicine	Briefly outline Dr. Steffe's comment on unhealthy lifestyle	What causes stroke according to Dr. Ranti Familoni's submission in the passage?	What additional information about the risk of consuming red meat does professor Tola Atinmo give in the passage?
II	What is Metabolic Syndrome as stated in the paragraph?	Which is most risky for health? (a) Consuming heavy processed meat (b) Consuming more fruits and vegetable with small amount of fish and poultry. Give at least two reasons for your answers as stated in the passage.	What are cardiovascular diseases?	What general belief does the doctor give to be untimed? How does she prove it?	Briefly describe gout and it causes as stated in the paragraph.

A SAMPLE OF J4CIS Paragraph inquiry Sheet

(Passage Three): Paragraph Specification Task

Student's Matriculation No.....

Course Combination:

Level of Study:

Sex:

Passage Title: cardiovascular diseases

Questions	Paragraph A (Home Group A) Specification Task
I	The U. S researchers have warned that
II	Metabolic Syndrome is

Follow-up Assignment/J4CIS Passage Inquiry Sheet (Passage Three)

QUESTIONS	Title: Cardiovascular diseases
I	The U. S researchers have warned that
II	What is metabolic Syndrome?
III	
IV	What are Cardiovascular diseases?
V	What additional information does professor Tola Atinmo give about the risk of consuming red meat?
VI	What advice does professor Tola Atinmo give to the readers?
VII	Briefly outline Dr. Steffen's comment on unhealthy lifestyle What is the idea of the passage? Summarize in five sentences

	a)
	b)
	c)
	d)
	e)

Passage four

Nigeria: The Good

Literally, all who believe in God must conclude that God loves this Nigeria, dearly. Those who do not may simply say, at least, that nature is very fair to Nigeria. Modern Nigeria today is endowed with stupendous potential for economic, political and technology-cum-industrial greatness. Her huge size makes her one of the biggest nations of the world. In fact, Nigeria is the biggest nation in Africa, with the potential of being the true giant of Africa. Her geography is arranged perfectly for her to have stupendous agricultural potential. Stretching from the tropical rain forests on her coastline to the alluvial and excessively fertile savannah grasslands of the hinterland, with all the numerous rivers and freshwater reservoirs which criss-cross the country, Nigeria is a natural candidate for rapid agricultural industrialization.

These God-given potentials which we did not work to produce could, with very little creative self-efforts make Nigeria the true food basket of Africa and perhaps the world. From this free gift, Nigeria has also a guaranteed position as an industrial giant, a technological power that could be very wealthy, if only she would develop this natural endowment alone. When you add to this, the huge mineral resources, which abound in plentiful supply under the soils of Nigeria, quit naturally, minerals such as coal , columbite, limestone, marble, lead, zinc, salt, uranium, gold, tin and many others, such as the much sought after black gold

petroleum- all of which God Almighty just literally dumped here, not through any effort of ours, you can, in the context of what obtain in the world today, conclude that Nigeria indeed is destined by God to be one of the wealthiest, most endowed, and perhaps the happiest place to live in; a self-sufficient industrial and technological giant a real world power.

Only a very little creative effort is required of Nigerians to actualize this tremendous potential. Through the colonial fiat of nation creation, often solely for the convenience of the administering colonial power, Nigeria again found herself conferred with potential greatness, not through any conscious actions of the colonizing power to do all these God so endow Nigeria. In the process, of the amalgamation of the British colony of Lagos, and the British protectorates of southern and northern Nigeria, the nation-state of Nigeria acquired a huge population, this population is rumoured to be standing today at between 100 and 150 million people, thus making Nigeria the biggest black nation on earth. In the context of meaningful interaction of a credible nature, in the comity of nation, where a nation's size, economic, industrial and technological capacity and capability determine her power status, Nigeria's size is a plus. Coupled with her stupendous naturally endowed wealth, Nigeria is an "A" candidate for a credible, dominant world power.

Nigeria's position is made even favourable and enviable as the advanced technologies choke themselves up with surplus manufactured goods in an ever shirking, purely consumptive, market. Her huge size makes her an enviable important world market, which has not and cannot escape the needle eye products. With proper maneuvering and creative manipulation, Nigeria could have acquired, a serious leverage which would ensure serious power status for her, as well as make her derive tremendous benefits from developed technologies, all principally from this endowed fact of her size and population. Before independence came, Nigeria's numerous tribes and differing nationalities showed promise of

a rare understanding require of all evolving systems destined succeeding. The post-colonial leadership, in sincere determination to gain their self determination, showed superior qualities of intellect and commitment.

They cooperated to defeat British imperialism, despite the multiplicity of her tribes and the constant application of the British tactics of divide and rule. Tribal Nigeria, led the trio of the late Sir Ahmadu Bello, the Sardauna of Sokoto, the late chief Obafemi Awolowo, and erudite Zik of Africa, the Rt. Hon. Dr. Nnamdi Azikwe, outwitted British divide and rule tactics and won self-government for the regions in 1957 and 1959 and independence, without a drop of blood, for the nation-state of Nigeria. Committed to the building of a modern nation-state out of the over 250 nationalities they presided over, these founders of modern Nigeria, adopted willingly at independence the best system necessitated by the apparent indomitable problem of ethnic pluralism confronting them. The Nigerian genius in them led them to choose, correctly, federalism as the best form of government suitable for Nigeria. In fact, at independence, this uncertain Nigeria of today was a modest showpiece of a successful Western democratic institutions and practices in complete multi-ethnic African setting. These were the happy days which made Nigeria appear properly poised to fulfill all the expectations the natural greatness conferred upon her by so many factors.

Source: The *NTI (National Teachers' Institute) course materials on Advanced Reading Skills* pages 173-176.

Follow-up assignment / J4CIS PIS

J4CIS Paragraph Inquiry Sheet (Passage Four)

Passage Title: Nigeria: The Good

Question	Paragraph A	Paragraph B	Paragraph C	Paragraph D	Paragraph E
I	Clarify the author usage of God and nature	Briefly explain the expression “this God given potentials which we did not work to produce”.	Is Nigeria really a candidate for a credible dominant world power? State your personal opinion.	From the author’s choice of words, how would you describe the author’s love for Nigeria?	Briefly discuss Nigeria before and after independence according to the passage
II	Why is Nigeria regarded as one of the biggest nations of the world in the paragraph?	What tremendous potential does God give to Nigeria that is mentioned in the paragraph?	Does the population of Nigeria which make her the biggest black nation on earth have any effect on her growth and development according to the passage/?	Despite the author’s praises of Nigeria, he identified peculiar problems of Nigeria, State the identified problems.	Mention any three(3) post colonial Nigerian Leaders mentioned in the paragraph

J4CIS Paragraph Inquiry Sheet (Passage Four)

Student's Matriculation No.....

Course Combination:

Level of Study:

Sex:

Passage Title: Nigeria; the Good

QUEST IONS	Paragraph "A" (Home group "A") Specification task
I II	Clarify the author usage of God and nature Why is Nigeria regarded as one of the biggest nations of the world in the paragraph?

Follow-up Assignment/J4CIS Passage Inquiry Sheet (Passage four)

Question	Passage Title: Nigeria; The Good
I	What is the relevance of the title of the passage (Nigeria the Good) to the content of the passage?
II	Is the “true giant of Africa” a good assessment of Nigeria in the passage? Justify your response from the passage.
III	 Why is Nigeria regarded as one of the biggest nations of the world in the passage?
IV	 List five gifts that God/Nature gave Nigeria which makes her the greatest that is mentioned in the passage. a) b) c) d)
V	e) Mention three post Colonial Nigerian Leaders as stated in the passage: a) b)
VI	c)
VII	What form of government is mentioned in the passage that is suitable for Nigeria? Describe the author’s feelings for Nigeria

Passage five

Evolution and development of Western Education

The roles played by the Jews, Greeks and Romans in the evolution and development of western education can only be understood in light of the historical milieu in which they occurred. It is in this context that a number of predisposing factors to the inception and development of western education will be discussed. The history of western civilization is war ridden. The Greek city states, for example, were constantly involved in warfare with one another, and causing the breakdown of kinship ties traditional blood links and age-based hierarchies gave way to individualism, competition, secularism and mobility. This did not only spread to the other western nations, it also caught up with the rest of the world ideas of citizenship, equality, fairness, e.t.c sprang up while educational institutions evolved formalization of their approaches to training.

In a similar vein, Rome was for about two centuries involved in persistent warfare before the roman empire was brought into existence war and the development of the military community had its educational implications training in these societies had to emphasize the special qualities and traits associated with warfare, moral values like valour, courage, sacrifice, self-denial, speed, heroism and discipline expected from citizens were relevant essentially to military exploits. The turmoil of war and the attendant devastations brought fundamental changes to societal life it was therefore not uncommon for obsolete socio-political and economic structure to be broken down and replaced with better arrangements.

Pacts and alliances were made by different nations with a view to ensuring peace and security. Territorially centralized and sovereign political entities emerged in the

process. These modern states monopolized the legitimate use of force through the control of the armed forces and maintained bureaucracies for administrative purposes. The law was used to regulate the relationship between the state and the individual while the principles of freedom, equality and justice became primary objectives of the state. Right from the inception of Christianity in the first century A, D., It had played a similar role. The moral and character development of the faithful had always constituted part of education to the extent that the Christians Church maintained a strong influence on education. Scholasticism came under the Roman Catholic Mission and the authority of the Pope as head of the Roman Catholic Church. Though the Renaissance period sought a reversal of church influence, evidences of religious influence on education persisted.

Certain other events which affected western education in its evolution were imperialism which did not only bring nations into direct contact but also put certain nations under the administration of imperial overlords. The significant contributions of the Romans to the development of western education could be traced to imperialism. In the midst of all these, most of the countries of the world did not lose their national focus. They retained the structure of western education as well as its philosophy and curriculum, but also added their own cultural values and national ideals. Revolutionary reforms also brought fundamental changes to the western society. These changes touched on the educational system and consequently affected the development of western education. The industrial revolution, for example, replaced the man with machine, brought the factory system and mass production as well as the bureaucratic organization of the workplace. The French and Russian revolution of 1917 respectively, also significantly influenced societies to the extent that educational objectives, curricula and structural organizational had to be modified to suit the emergent circumstances.

The contributions of philosophy and science were also significant to western education, ideas which emanated from western philosophers constituted the foundation upon which the structure, Organization and curriculum of education was laid. It also grew through policies and practices which were closely linked to these thoughts and reality of daily experience. Science emerged as a field within the western educational curriculum and has gone a long way to shape educational growth and development. Science has taken the forefront of the educational enterprise and become a major objective of education in most countries of the world.

Source: The Use of English in Higher Education pages 42-43 [UNILORIN]

Follow-up assignment /J4CIS PIS

J4CIS Paragraph Inquiry Sheet (Passage Five)

Passage Title: Evolution and Development of Western Education

Question	Paragraph A	Paragraph B	Paragraph C	Paragraph D	Paragraph E
I	Explain the expression “The history of western civilization is war ridden”	What brought fundamental changes to societal life?	What measures do different nations make to ensure peace and security?	Briefly discuss the concept “imperialism”	How does philosophy contribute to western education?
	How would roles played by the Jews, Greek and Romans in the evolution and development of western education be clearly understood as stated in the paragraph?	Which country was about two centuries involved in warfare?	What influence does the inception of Christianity have on western education?	What fundamental changes do revolutionary reforms bring to educational system? List two (2) revolutions mentioned in the paragraph?	List two roles played by science in the evolution of western education.

J4CIS Paragraph Inquiry Sheet (Passage Five)

Student's Matriculation No.....

Course Combination:

Level of Study:

Sex:

Title: Evolution and Development of Western Education

QUESTIONS	Paragraph "A" (Home group "A") Specification task
I	Explain the expression "The history of western civilization is war ridden"
II	How would roles played by the Jews, Greek and Romans in the evolution and development of western education be clearly understood as stated in the paragraph?

Follow-Up Assignment/J4CIS Passage Inquiry Sheet (Passage five)

QUESTIONS	Title: Evolution and Development of Western Education
I.	List two roles played by science in the evolution of western education. (a) _____ (b) _____
II.	What influence does the inception of Christianity have on western education? _____
III.	Discuss the concept “imperialism” _____ _____
IV.	Do you agree with the title of the passage? State your reasons. _____ _____
V.	State the two methods that different nations made to ensure peace and security (a) _____
VI.	(b) _____
VII.	What fundamental change does a revolutionary reform bring to educational system? _____ List two (2) revolutions mentioned in the passage (a) _____ (b) _____

Passage Six

The Overpopulation Retards Economic Development

We are being daily exposed to a stream of ideological propaganda to the effect that the world is threatened by an unprecedented demographic crisis known as rampant overpopulation. We are told that countries whose populations are growing at an annual rate of 4% are creating serious problems for themselves because this 'excessive' growth causes poverty, overcrowding, food shortages and overuse of scarce public utilities and of other inevitably limited resources. Poor countries are causing their own poverty. We are made to believe that every society has a 'natural' limit to its capacity to produce more of the goods essential to provide decent living standards for all its people; that a first expanding population severely strains a society's productive ability because an excessive proportion of its population is young children who, being unable to work, are a dependent burden; that the small section of society which does work productively is dragged down by the weight of too many mouths to feed.

That the poor are an embarrassing burden on the backs of the rich, that high fertility and large family size depress living standards by eroding ability to save and by reducing investment per person in physical capital and human skills. That had it not been for Nigeria's relentless demographic explosion, the country's meager resources could have provided a more satisfactory rise in overall living standards; that the possibility of self-improvement through abstaining from procreation means that the poor do have the opportunity to raise their own income level. Finally, we are told that every effort should be made to convince the poor that lowering their fertility rate would be in their own interests as a means to improve their

welfare, and that the only solution is for governments to take all possible steps to reduce population growth rate in order to avert the impending catastrophe.

This fallacy first gained academic respectability in the person of Thomas Malthus who wrote a book, 'Essay on the Principle of Population' in 1798. He argued that while the economy and per capita income increase by arithmetic progression (1, 2, 3, 4,5 ...), population grows by geometric progression (1, 2, 4,8, 16...); that the masses are unable to exercise moral restraint and therefore are doomed to linger perpetually at bare subsistence level. Inevitably, famines must periodically occur, destroying millions of lives, in order to bring population back into line with society's capacity to produce. Since Malthus's time, the theory has continued to raise its ugly head, and it is now a central theme of the World Bank and the U.S.A.

Malthusianism should be discredited as it shows gross misunderstanding of and lack of respect for the majority of people. To tell hungry people that the greatest obstacle to their development is their own animal sexual desire is identical to the theory that underdevelopment is due to racial inferiority, laziness and stupidity of the natives. Fortunately, the Nigerian Federal Government took a sober and reasonable line when it stated in the Third National Development Plan that a large and rapidly growing population does not 'constitute a serious or significant obstacle to domestic economic progress. Population explosion does not cause poverty, but rather it is a rational defence mechanism of the poor against the threat of their extinction.

All living creatures perform their functions with a rhythm and energy most favourable to the survival of their species. Birds tend to lay more eggs after a natural disaster. Human fertility rises sharply when war has caused widespread loss of life. Population growth, far

from continuing by geometrical progression to infinity, conforms to cycles connected with structures in the natural and cultural environment. Temporarily, high birth rates in poor countries are an expression of dynamism, maturity and vitality -a higher and healthier condition than the almost zero fertility of some industrialized nations.

Source: Use of English and communication skills, NTI [National Teachers' Institute Course Material pp167-169].

Follow up assignment/ J4CIS PIS

J4CIS Paragraph Inquiry Sheet (Passage 6)

Title: Over-population Retards Economic Development

Question	Paragraph A	Paragraph B	Paragraph C	Paragraph D	Paragraph E
(i)	List four (4) problems of Overpopulation mentioned in the paragraph	What measure should be taken by individuals and the government to reduce population growth in the paragraph?	Why must famines periodically occur in over populated nations?	Why does the writer suggest that Malthusianism should be discredited?	What is the main idea of the paragraph?
(ii)	What is the main idea of the paragraph?	What major problem of overpopulation is chiefly discussed in this paragraph?	Briefly discuss Thomas Malthus (1978) submission on over population and economic development	State the Nigerian Federal Government stand on Malthus submission	What is the writer's opinion on the poor country and the industrialized nations?

J4CIS Passage Inquiry Sheet (Passage 6)

Student's Matriculation No.....

Course Combination:

Level of Study:

Sex:

Title: Overpopulation Retards Economic Development

QUESTIONS	Paragraph 'A' (Home group 'A') Specification task
I.	List four (4) problems of overpopulation mentioned in the paragraph (a) _____ (b) _____ (c) _____ (d) _____ (e) _____ What is the main idea of the paragraph? _____
II.	_____ _____

Follow-Up Assignment/J4CIS Passage Inquiry Sheet (Passage 6)

Questions	Title: Over-population Retards Economic Development
I.	State five (5) fallacies that the writer recognized in the passage regarding over-population and economic development (a) _____ (b) _____ (c) _____ (d) _____ (e) _____
II.	Give the writer's defence against the five (5) fallacies you have identified (a) _____ (b) _____ (c) _____ (d) _____ (e) _____
III.	What narrative techniques do the writer employed? _____ _____
IV.	State the Nigerian federal government stand on overpopulation and economic development _____
V.	List four (4) problems of overpopulation that are discussed in the passage (a) _____ (b) _____ (c) _____ (d) _____
VI.	What is the author's opinion on the poor countries and the industrialized nations? _____
VII.	Is it true that the poor country is actually causing her own poverty? Justify your response from the write-up _____ _____

Passage Seven

The Importance of Education

The importance of education in the socio-economic development of Nigeria, indeed of all nations, cannot be over-emphasized. In its broadest sense, education is indispensable for the building and sustenance of a modern nation state. It prepares enlightened citizens capable of communicating among themselves at an intelligent level thus making it possible for them to work out their social and economic relationships. Education is, in fact, a necessary ingredient for national unity, stability and development, for it not only prepares an individual citizen for living and personal fulfillment, but also makes it possible for him to contribute effectively to the development of his community and the nation generally. No wonder then that every country devotes a substantial part of its resources to the education of its citizens, using it as an instrument for national integration and development.

The various levels and types of education prepare citizens and confer on them certain abilities and competence that have profound effect on their future roles in and contribution to the society. The philosophy of Nigerian education, as well as its aims and objectives has been clearly spelt out in the National Policy on Education, with each level of education given a role in contributing to the unity and development of this country. Education at the primary level confers on the individual the ability to read and write, thus increasing his communication ability with other citizens as well as between various communities. The post-primary level is made up of the secondary schools and technical colleges.

The secondary schools generally prepare students for admission into higher education, while technical colleges impart skill and professional training for direct, on-the-job employment; higher education is broadly classified in this country as the education given in

the universities, polytechnics and monotechnics and colleges of education. This level of education equips individuals with the necessary physical and intellectual skills to develop them into useful members of the community, as stated clearly in the National Policy on Education. The role of education in promoting national unity and development is generally accepted. The level and type of education acquired by an individual generally determines the nature of his job and his place in society. Competition is thus intense for educational opportunities, and factors which limit any part of the country from effectively competing for education, be they historical, circumstantial or-even as a result of self-imposed apathy, generate negative political and social consequences. In order to reduce these problems to the minimum, the various governments must ensure adequate and equal educational opportunities for all citizens who need it. Each part of the country must have equal access to education both in terms of location and proper funding of institutions as well as staffing and students' enrolment.

That is why successive federal governments have made efforts to put in place policies that would ensure that educational opportunities are available to all and federal educational facilities are reasonably spread throughout the federation. The main problem is to ensure that every state and local government is taking advantage of these federal facilities virtually at their doorsteps to enhance their educational problems and then take conscious effort and sacrifice to provide the necessary resources to solve them. Most of the Northern States already have identifiable educational problems. One of the most urgent is how to increase the quantity and quality of output from the secondary schools for admissions into the tertiary institutions. At the moment, less than 15% of those who sit for the WAEC and JAMB matriculation exams in all public schools pass and obtain the necessary credits for direct admission into the universities and polytechnics?

These problems call for massive financial investment in the primary and secondary school levels of education, accompanied by stringent quality control measures. A successful example of how a state government can identify and solve a problem is the development of six science secondary schools by Kano State. This has enabled the state to utilise all available places offered to it and go even further to take up unused openings for other states.

Source: Use of English and Communication Skills NTI [National Teachers' Institute Course Material] pp 162-163.

Follow-up assignment/ J4CIS PIS

Passage inquiry sheet (passage seven)

Paragraph specification task

Paragraph A	Paragraph B	Paragraph C	Paragraph D	Paragraph E
1. What is indispensable for the building and sustenance of a modern nation state?	List the various levels and types of education practiced in Nigeria that are mentioned in the paragraph	What determines the nature of individual job and placement in the society?	What problem of education is identified in this paragraph?	What educational problem is identified in this paragraph?
2. State three basic importance of education mentioned in the paragraph	Briefly state the roles each level plays in contributing to the unity and development of Nigeria as spelt out in the national policy on education.	What problem does education create among Nigerians as stated in the paragraph?	What effort should successive federal government ensure that educational opportunities are available to all?	What solution was provided in the paragraph?

J4CIS Paragraph inquiry Sheet (passage 7)

A Sample of J4CIS paragraph inquiry sheet paragraph “A” specification task

Student’s Matriculation No.....

Course Combination:

Level of Study:

Sex:

QUESTIONS	Paragraph ‘A’ (Home group ‘A’) Specification task
I	What is indispensable for the building and substance of a modern nation state?
II.	State three basic importance of education mentioned in the paragraph (a) (b) (c)

Follow-Up Assignment/J4CIS Passage Inquiry Sheet (Passage 7)

Questions	The Importance of Education
(I)	List six importance of education brought out by the author
(II)	What are the problems education in Nigeria is encountering as pointed out by the writer?
(III)	What are the roles assigned to the following levels of education? (a) Primary level (b) Secondary level (c) Tertiary level
(IV)	What determines the nature of individual job and placement in the society?
(V)	What effort should successive federal government ensure to see that educational opportunities are available to
(VI)	all? What solution was provided for all educational problems stated in the passage?
(VII)	What is indispensable for the building and sustenance of a modern nation state?

Passage 8

An extract of the beggar's strike

The beggars are in a flutter of disquiet; there is a rumble and grumble of suppressed anger. They have just returned from old Gorgui Diop's funeral. All they knew was that he had been picked up in a raid. A few days later they heard on the radio an announcement from the hospital superintendent, requesting the next-of-kin of Gorgui Diop, deceased, aged about fifty-two, native of sandiara, to come and collect his body. No one had any idea on what circumstances he had been taken to hospital or what he had died of. An oppressive silence hangs over Salla Niang's courtyard. It is the moment when the jinn are abroad, wallowing in the heat, when the sun that accompanies the rainy season pierces man's bruised flesh with its flaming darts. Stunned by apprehension and grief, the faces of this human flotsam wear an expression of terror. Tired of clobbered! Tired of being hunted! Tired of running! For some time now they haven't been going out in daylight any more. They get up before dawn, coverage in small tight groups on the markets and the mosques, the only places where human activities are carried on before daybreak. When windows suddenly thrown open to the morning air and the uninterrupted rumble of the traffic announce the awakening of the city, they slip discreetly back to salla's courtyard. They have buried old Diop and here they are, back again, heavy-hearted, drenched in perspiration. The scorching air reeks of poverty and human desolation. 'If we don't look out we will all end up like Gorgui Diop,' Nguirane Sarr cries. 'We will all die like dogs!'

Today he is wearing a white caftan which has become the colour of ashes. He has bought a new pair of spectacle, this time with black frames. He wears a thin gold chain round his neck. The gash across his face has not yet healed; scabs have formed round the edges of the wound that is stained with mercurochrome. 'And, in any case, Gorgui Diop didn't do any harm,' he resumes. 'Listen, my friends; since they, want us to leave them in peace, let's leave

them in peace. Let's stay here! Don't let's move from here!' His friends expected anything but this. They are desperate, terrorized; they want a solution which will ensure that they are treated as citizens with full rights like everyone else. But Nguirane Sarr astonishes them. His suggestion seems devoid of sense. 'We don't go asking for charity anymore?' 'What shall we do? Must we be left without any resources? It's true that things aren't easy for us, but we still manage to take a bit of money here and there.' 'Nguirane, your suggestion just isn't feasible. Don't get carried away by anger. Life is full of pitfall. We must be brave; one day they will leave us alone. But if we don't go out looking for charity, where shall we go? If we stay at home sulking, we will just be cutting off our own noses to spite our faces. 'That's where you're wrong!' Nguirane thunders. Backs that had stooped beneath the sun's heat are straightened. In Nguirane's voice are undercurrents of hospitality, contempt, anger.

'That's where you are wrong! I've told you before: it's not because of our rags, nor our physical disabilities, nor for the pleasure of performing a disinterested good deed that people deign to throw us the money we get as donations. First of all they have whispered their dearest and most secret desires to the alms they tender: "This donation is so that the God may grant me long life, prosperity and happiness..." "This donation is so that the Creator may remove all the difficulties I might encounter on my path..." "In exchange for this contribution may the master of heaven and earth help me to climb to the top of the ladder, make me the head of my department..." "Thanks to this offering, may the almighty drives away all my cares as well as those of my family, protect me from Satan, from man eating sorcerers and all the spells that might be cast upon me ..." That's what they say when they drop a coin or a little gift in the palm of your out-stretched hand. And when they are kind enough to invite you to share their steaming, odorous calabashes of millet porridge and curdled milk, do you imagine it's because they thought you might be hungry? No, my friends,

that's the least of their worries! Our hunger doesn't worry them. They need to give in order to survive, and if we didn't exist, who would they give to? How could they ensure their own peace of mind? They don't give for our sake; they give for their own sake! They need us so that they can live in peace!'

Salla Niang, who was cooking the midday meal at the other end of the courtyard, had been listening to everything Nguirane had been saying. She now moves deliberately forward, pushing her way through the dense throng till she stands in front of Nguirane. She is wearing a camisole that is pulled in at the waist and shows off the curves of her hips. Tiny beads of sweat stand out on her forehead and nose. Gorgui Diop's death has affected her deeply; she had known him in her native village, where everyone was unanimous in saying that he had been her father's best friend. As she had scarcely known her father, she had transferred all her affection to this man who was the friend of all children in the village. Every evening they crowded round him and he used to tell them marvelous stories about the origin of the world. Later, when Salla saw him turn up in the City, she hastened to offer him her hospitality. Her features became drawn with sorrow. She reached out to the assembled crowd a hand stained with henna arabesques. 'Now, my friends, the hour has come to make our choice: to live like dogs, pursued, hunted, tracked down, rough-handled, or to live like men. Gorgui Diop's reason for living was always to bring a little cheer to men's heart. But these madmen have forgotten the meaning of cheer. Since Gorgui Diop has not been spared – Gorgui Diop who made people laugh – no one will spare. So now, let's have no more of this stealing in and out on the sly; let's have no more of this running away like mad; let's have no more distress and fear. Let's all stay here! Do you hear, we will stay here! In a very short time you'll see that we are as necessary to them as the air they breathe.

Where will you find a man who's the boss and who doesn't give to charity so that he can stay the boss? Where will you find a man who's suffering from a real imaginary illness and who doesn't believe that his troubles will disappear the moment a donation leaves his hands? Where will you find an ambitious man who doesn't think that the magic effects of charity can open all doors? Everyone gives for one reason or another. Even the parents of man who's awaiting judgment, expecting to be condemned, have recourse to charity, to blur the judge's reasoning, in the hope of an acquittal.' Everything that Salla Niang has said is based on what she saw during her experiences as a maid-of-all-work. She lived in houses where everyone stuffed themselves fit to burst; the left-overs that they threw in the dustbin could have fed ten paupers, but paupers were never invited to share the meal; paupers are dirty, a nuisance, they don't know how to behave. But, in these same houses, when the marabout recommended them to feed seven, ten or twelve paupers on delicacies for three days, they went to seek out these same paupers, invited them to their homes, welcomed them, pressed dishes upon them that they would never have meat; a delicious couscous with raisins, mixed vegetables, dates and prunes; and after every meal, fresh cola-nuts to aid the digestion.

(Adopted from Animata Sow Fall (2002) *Beggar's Strike*).

Follow-up Assignment/J4CIS Passage inquiry sheet

(Passage eight): J4CIS Paragraph Inquiry Sheet (Passage 8)

Passage Title: An extract from the Beggar's strike

Questions	Paragraph A	Paragraph B	Paragraph C	Paragraph D	Paragraph E
I	What causes the suppressed anger narrated in the paragraph?	What is the profession of the suppressed expressed in the paragraph?	Do you agree with Nguirane on why the rich give alms?	Why did Gorgui Diop's death affect Salla Niana deeply?	What is the magic effect of charity?
II	Which funeral have the beggars just returned from?	What was the suggestion of Nguirane?	Describe how the rich ensure their own peace of mind as stated in the paragraph	Describe Gorgui Diop's personality before his death as seen in the paragraph	Briefly narrate Salla Niang experience as a maid-of-all-work

Student's Matriculation No.....

Course Combination:

Level of Study:

Sex:

(Passage eight): A sample of J4CIS Paragraph Inquiry Sheet

Title: An extract from the Beggar's strike

Paragraph "A" (Home group) Specification Task

- i. What causes the suppressed anger narrated in the paragraph?

.....
.....
.....

- ii. Which funeral has the beggars just returned from?

.....
.....
.....

Follow-Up Assignment/J4CIS Passage Inquiry Sheet (Passage 8)

I	Suggest a suitable title for the passage
II	Which funeral has the beggars' just returned from?
III	What is the cause of his death?
IV	Why were the beggars angry of his death?
V	Summarize the story in one paragraph
VI	Evaluate the character of the beggar.....
VII	Describe Gorgui Diop's personality before his death

APPENDIX II

Jigsaw IV Cooperative Instructional Strategy (J4CIS) Instructional Guide for the Teachers of Experimental Group A

General Information

Jigsaw IV is a modification of jigsaw I, II and III. It is a variation propounded by Holliday (2002). It adds a few extra components to other jigsaw cooperative instructional strategies, in J4CIS class, the teacher starts by introducing the topic. Quizzes are given to the expert groups and a re-teaching period is built in, to address aspects that were not taught well in cooperative groups (if there is any).

J4CIS tests whether “expert” members are really “specialists” (through the quiz). The quiz result determines the missing parts of the learning (if there is any). The teacher then re-teaches to complete the learning, the same implementation is repeated to the “home” group after the expert members might have carried out their topic presentation in home group.

Teacher’s Role

In J4CIS class, the teacher groups students to “home group” according to their language proficiency (performance in pre-test), course of study and sex. She selects the learning material, structures the groups, explains the cooperative nature of the group work, provides an environment conducive for the work, monitors group work, assists students in working with the material, floats from group to group in order to observe the process of learning, intervenes if any group is having trouble such as member dominating or disruptive, assigns a task to a student in home group, assigns students to “expert group ”and “expert group” leaders, occasionally whispers to the group leader to intervene until he/she can

effectively do it himself/herself. She also organizes quizzes and re-teaching the missing aspect of the learning (if there is any).

Students' Role

In J4CIS class, the students are divided into two groups: the “home groups” and the “expert groups”. In “home group”, each student is made to respond to a question or more, which is often referred to, as task specification that requires different students assume specialised role in reaching the objective of the learning. The students will discuss their assigned portion to the group in preparation for “expert group” presentation, “home group” members may contribute by correcting or supplying information on the content. After meeting with the “expert group”, they will fill the paragraph enquiry sheet. Each student, now an expert in the assigned portion, would return to his/her “home group” to teach the aspect. They will fill the J4CIS passage inquiry sheet, together, and the sheet would either be presented verbally to the whole class by the group leader before submission to the teacher for assessment or it could be presented to the teacher for assessment without necessarily presenting it to the class.

In J4CIS, “expert group” class which consists of one representative from each “home group” responding to the same specification task. They meet to compare notes and refine presentations. Through their discussions, observations, corrections, comparison and modifications, they become experts on the specialised task, these then equip them to answer the quiz questions given by the teacher when they return to their different “home group” to teach the content to their members and fill the J4CIS passage inquiry sheet together in their home group.

A Sample Lecture Plan of Jigsaw IV Cooperative Instructional Strategy (J4CIS) for Experimental Group A

Session: J4CIS

Class: NCE II

Subject: Reading Comprehension

Topic: Passage Reading

Sub-topic: Enemies Everywhere

Duration: 55 minutes

Instructional Materials: Jigsaw puzzle game, J4CIS paragraph inquiry sheet and J4CIS passage inquiry sheet.

Behavioural Objectives: By the end of the session, students should be able to:

- Fill the J4CIS paragraph inquiry sheet correctly.
- Fill the J4CIS passage inquiry sheet correctly.

Entry Behaviour: Students are familiar with passage reading.

Presentation:

Steps	Lesson Content	Researcher's Activities	Students' Activities	Duration
1	Introduction	The researcher and her assistants assign students to "home group" and distribute the typed passage to each student.	Students' arrange their seats in circle or semi-circle form, collect the distributed passage individually.	4 minutes

2	J4CIS Settings	The researcher or assigned assistant appoints one student from each “home group” as the leader, provides J4CIS paragraph inquiry sheet for each paragraph, then assign a student to a paragraph.	Students collect their J4CIS PIS from the leader and know their specification task.	3 minutes
3	J4CIS Rules	The researcher or the assigned assistant uses the jigsaw puzzle to explain the group rules and to emphasise that each student is an important part of the puzzle that makes the final jigsaw product, because the strategy is characterized by interdependent learning.	Students listen attentively and watch the jigsaw game.	3 minutes
4	Studying new/unfamiliar words	In order to ease the flow of the J4CIS activities in the “home group”, to	Students listen attentively and respond to the researcher’s questions.	7 minutes

		help students organize their thoughts for better preparation, she reads the passage to the whole class. Asks students to note the difficult words and explains the meaning of such words to the class.		
5	Home group activities	The researcher floats from group to group to observe the process of learning.	Students in home group concentrate on their specification task.	7 minutes
6	Expert group activities	The researcher directs students to move to “expert group” of their assigned paragraph and appoints a leader for each group.	The group leader organizes the group to discuss the assigned paragraph specification task, they correct and modify individual submission, outline the paragraph content and fill the J4CIS paragraph inquiry sheet.	7 minutes
7	Students return to	The researcher or	Students return to their	20

	their home group	assigned assistants instruct students to return to their home group, each member is now an expert in the assigned paragraph. Members of each home group would teach each other their assigned paragraph respectively (turn teaching). This stage merged into the final cohesive whole, the students would then be directed to fill the J4CIS passage inquiry sheet	original “home group” as an expert of an assigned paragraph respectively and fill the J4CIS passage inquiry sheet together.	minutes
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Evaluation: The teacher will re-teach the missing content, then the filled J4CIS passage inquiry sheets would be exchanged group by group, the researcher or assigned assistant then states correct answers for exchange marking = (5 minutes).

APPENDIX III

Question-Generation-And-Answering Strategy (QGAAS) Instructional Guide for the Teachers of Experimental Group B.

General Information

QGAAS is a generative learning strategy, a learner-centred approach of learning that is based on constructivist theory which emphasise that active learners' involvement in learning produced increased gains on recall comprehension, higher order thinking and elaboration. This study would employ a student–students' generative inquiry strategy (i.e it involves students as teacher and learners').

Teacher's role

The teacher will create a questioning environment after the distribution of the selected passage by making reading to be purposeful and meaningful to students. She asks questions to guide students' questioning as they read, questions like what do you think we are going to find out? What are the important ideas of the passage? What is the author's purpose of writing? Then she asks students to choose a partner that they will read together bearing the questions in mind .The two readers would assign themselves a role (important idea finder and a detailer) The teacher would model students' learning by asking them to turn the statements to questions and by providing questions stem for easy question formation and answering .

Students' role

Students' sit in normal/conventional classroom setting collect the distributed passage and the QGAAS activity paper, engage in reading, follow the teacher's instruction by

choosing a partner, and then re-read with the partner playing an assigned role (important idea finder or a detailer) bearing the teacher's question prompting in mind, engage in generating questions using the question stems to guide himself or herself. After discussing with the partner she/he goes back to his/her seat to attend to the QGAAS activity paper.

A Sample Lecture Plan of Question-Generation-And-Answering Strategy (QGAAS) for Experimental Group B

Session 1:	QGAAS
Class:	NCE II
Subject:	Reading Comprehension
Topic:	Passage Reading
Sub-topic:	Enemies Everywhere
Duration:	55minutes
Behavioural Objectives:	By the end of this session, students should be able to generate meaningful questions from the passage and answer them correctly.
Entry Behaviour:	Students are familiar with passage reading
Instructional Material:	QGAAS activity paper and Question-generation stem

Presentation:

Steps	Lesson content	Researchers' Activities	Students' Activities	Duration
1.	Pre-reading activities (creating a questioning environment)	The researcher engages students in Pre-reading activities by telling them the title of the passage and creating a questioning environment by asking them questions like; what do you think we are going to find out in the passage with the title? What is the writer's purpose of writing?	Students' respond to the researcher's questions	4minutes
2.	Introduction (Reading)	Researcher introduces the lesson by distributing the typed passage and asking students to read silently bearing in mind those questions and informing them that they will generate more questions. She explains the difficult words to ease students reading comprehension	Students collect the distributed passage and read silently	3minutes
3.	Reading	She asks students to choose a partner, who in turn assigns a role to themselves (important ideas finder or detailer) and re-read the passage together	Students respond to the researcher's directives	8 minutes

4.	Generative activities	She asks students to discuss the important ideas and supporting details with their partner	Students discuss with partners	3 Minutes.
5.	Generative activities	She asks students' to return to their seats, distribute the QGAAS activity paper and asks students to attend to it individually	Students respond to the researcher's directive	10 Minutes
6.	Generative activities	She writes the question-generation stem on the chalkboard to guide students' question-generation exercise	Students attend to the QGAAS paper	3Minutes
7.	Feedback	She calls on some students to read out the important ideas that they discovered in specified paragraph and directs other students to note and make modifications in their submissions	Students respond to the directive	7 Minutes
8.	Feedback	She asks students to turn the important ideas statement to questions and asks others to note and make modifications	Students respond to the researcher's directives	7Minutes
9.	Feedback	She asks students to find the supporting details in the text to answer the generated questions	Students respond to the researcher's directives	

				4Minutes
10.	Evaluation	She asks some students to read out their answer to the generated questions while others take notes, and makes modifications through the teacher's guidance	Students respond to directive	4 minutes
11.	Conclusion	She briefly discusses the passage content and asks for more questions from the students	Students respond appropriately	5 minutes

The QGAAS Stem (Question-generation guide)

What does -----mean?

What is -----?

How are ----- and ----- different?

Explain why -----?

Explain how -----?

Describe -----

Briefly outline -----

Summarize ----- into -----

A sample of researcher designed questions-generation-and-answering strategy (QGAAS) activity paper/ follow-up assignment

Important ideas				
Write a statement for each paragraph that explains its important idea.				
1, _____				
2, _____				
3, _____				
4, _____				
5, _____				

↑

Questions				
Turn your important ideas into questions				
1, _____				
2, _____				
3, _____				
4, _____				
5, _____				

↑

Find supporting details from the text to answer the questions				
Paragraph 1	Paragraph 2	Paragraph 3	Paragraph 4	Paragraph 5

↓

↓

↓

↓

↓

Answer the questions using the gathered information				
1, _____				
2, _____				
3, _____				
4, _____				
5, _____				

APPENDIX IV

Conventional Instructional Strategy (CIS) Instructional Guide for the Control Group

General Information

The CIS is a teacher-centred approach of teaching. It is also called talk and “chalk” or lecture method. It is at present used in most colleges of education in Nigeria.

Teacher’s role

The teacher is in full control of the class. The teacher will supply all necessary information to the students, ask questions and correct students’ responses. She will distribute the selected passage to each student, read the passage aloud, summarize passage content and directs students’ learning to foster the attainment of the lesson’s behavioural objective.

Students’ role

Students sit in normal conventional classroom setting, listen attentively to the teacher, and ask questions when there is confusion, respond to the teacher’s questions and directives.

A sample lecture plan of conventional instructional strategy (CIS) for the control group

Session:	1
Class:	NCE II
Subject:	Reading Comprehension
Topic:	Passage reading
Sub-topic:	Enemies Everybody
Duration:	55 minutes.

Behavioural Objectives: By the end of the session, students should be able to:

- read and comprehend the passage correctly
- answer the follow-up assignment/class work
- get the main idea of the passage

Entry behaviours: students are familiar with passage reading

Instructional Material: The selected passage

Presentation:

Steps	Lesson content	Researchers' Activities	Students' Activities	Duration
1.	Introduction	The researcher introduces the lesson by distributing the selected passage	Students' collect the distributed passage	5 Minutes.
2.	Passage reading	She asks students questions like what do you think is the writer's purpose of writing the passage? Do you agree with the title? Why? Then she asks them to read silently	Students respond to the questions and read silently	10 Minutes
3.	Clarification	She instructs students to pick out difficult words in the passage and explains the contextual meaning of the identified words	Respond to the teacher's instruction	7 Minutes
4.	Passage reading	The researcher reads the passage and asks for questions.	Listen attentively and ask questions	7 Minutes

5.	Passage reading	She responds to students questions and directs them to answer the follow-up assignment/class work questions	Respond by answering the questions	7 Minutes
6.	Evaluation	She evaluates by asking students the following questions: - What is the central idea of the passage? - Do you agree with the passage title? State your reasons?	Respond by answering the questions	10 minutes
7.	Conclusion	She concludes by correcting students' responses	Students listen attentively while she corrects their mistakes	6 Minutes

APPENDIX V

Analysis of Pre-test Questions (unfamiliar passage)

Literal Response Questions

What is the occupation of the narrator and his friend?

Why were the narrator and his friend carted off in an army pick up?

What celebration are they preparing for?

Inferential Response Questions

Suggest a suitable title for the passage apart from the author's title

What is the bone of contention of the passage?

Evaluative response questions

Compare Mobutu and Kabila's regimes as written in the passage

Outline the passage in five sentences: 7 marks each

Literal response: 7 X 3 = 21 marks

Inferential response: 7 X 2 = 14 marks

Evaluative response: 7 X 2 = 14 marks

Total: 7 X 7 = 49 +1 = 50 marks

Analysis of Pretest Questions (Familiar Passage)

Literal response questions

A country with a higher income per head is said to be -----

Mention five problems posed by over populated nation

What causes political instability?

Inferential response questions

What is the effect of obtaining foreign loan on an over populated nation?

Does over population depend on sheer density? Exemplify from the passage

Evaluative response questions

What five remedies does the passage proffer to ensure a steady growth in an over populated nation

Outline five important ideas expressed in the passage

7 marks each

Literal response: $7 \times 3 = 21$ marks

Inferential response: $7 \times 2 = 14$ marks

Evaluative response: $7 \times 2 = 14$ marks

Total: $7 \times 7 = 49 + 1 = 50$ marks

Analysis of Post-test Questions (unfamiliar passage)

- 1) Do you agree with the title of the passage? State your reasons (inferential Question)
- 2) State the profession of the narrator and his friend (Literal question)
- 3) What celebration are they preparing for? (Literal question)
- 4) Why were they (the narrator and his friend) detained? (Literal question)

- 5) From the diction used in the narration, what field of register does the passage portray (inferential)
- 6) Compare Mobutu and Kabila's regimes as implied in the passage (Evaluative question)
- 7) Summarize the passage into five sentences (Evaluative question)

Analysis of Post-test Questions (familiar passage)

- 1) Define over population according to the passage (Literal response)
- 2) Why is obtaining foreign loan referred to as unproductive loan in the passage? (inferential)
- 3) List five problems faced by a nation that is over populated (literal)
- 4) What is political instability? (literal)
- 5) Mention five suggested measures for a rise in the production of labour (evaluative)
- 6) Why is Ghana with a small density of population appears to be more over populated than Britain with large density of population? (inferential)
- 7) Briefly summarize the passage into five sentences (evaluative)

APPENDIX VI

Test Specification Table

Reading Achievement Standard for Marking and Grading of Reading Comprehension

Comprehension Responses (Appropriate Achievement)	Comprehension Responses (Strong Achievement)
(1) <u>Literal response i.e. “Reading the line”</u> (a) Students respond accurately to most literal questions, skim large amount of text content in search of information, and locate literal information from the text. (b) Identify key story elements (like setting, characters, <i>events</i>, problem(s) / resolution theme / lesson) of a narrative text; explain how events are related to the theme. (c) Distinguish between main ideas and supporting details; concisely summarize key information and bias. (d) Distinguish between important and unimportant details.	Students’ ability to additionally demonstrate strong achievement response to questions or tasks by describing at the appropriate level with over all accuracy and precision
(2) <u>Inferential/Interpretive Response i.e. “Reading between the lines” (Appropriate Achievement)</u> (a) Students respond by making logical inferences about multiple complex characters (motivations, traits, feelings or personality), and strong events, describe relationships among characters and effect on the plot or overall theme. (b) Interpret relationships among ideas to draw conclusion (e.g. plot, sequence, cause/effect, and problem/solution) or make comparisons. (c) Use content clues and prior knowledge to explain the meaning of new vocabulary/technical terms; interpret subtle shades of meaning and figurative and descriptive language, interpret symbols (objects event motives) used by the author to convey meaning. (d) Interpret or use text features to understand the text (headings, subheadings, cutaways, legends, diagrams, graphs, glossaries, captions, chants, features boxes, sidebars): to make general inferences using this information.	<u>Comprehension Responses (Strong Achievement)</u> Students ability to additionally demonstrate strong achievement response to questions/tasks described at the appropriate level with overall accuracy and precision also; Demonstrate solid understanding of how story events are interrelated and provide thoughtful inferences i.e. information that requires more thoughtful engagement with the text.
(3) <u>Evaluative Response i.e. “Reading beyond the lines” Appropriate level</u> (a) Explain how different elements of an author style /techniques (e.g. dialect, descriptions, figurative language, flashbacks, symbolism, create meaning and reaction). (b) Evaluate purpose, structure and characteristics of a variety of text forms e.g. short story, ballad, report, explanation, persuasion, autobiography, science fiction fantasy. (c) Separating fact from opinion	<u>Comprehension Responses (Strong Achievement)</u> Students’ ability to additionally demonstrate response to questions/tasks described at the appropriate level with overall accuracy and precision; also can make insightful and sometimes sophisticated connections

Adopted from English Language proficiency Reassessment (ELPR) Test specifications for Reading Comprehension provincial Achievement Standard (2016).

APPENDIX VII

BUDGET

S/NO	Items	Unit cost	Total	Brand
a.	Personal Computer	1@160,000	#160,000	Hp pavilion G8
b.	A smart phone	1@85,000	#85,000	Window phone
c.	Printer	1@65,000	#65,000	Hplaserjetpro408
d.	A Generating set	1@90,000	#90,000	Tiger
e.	Duplicating Sheet	18 cartons @ 6,000 per carton	#108,000	80 Grammes
f.	Maintenance of the items above	120,000	#120,000	Hp cartridges Airtime (Recharge Card) Total Engine Oil e.tc
g.	Tuition fees	4 sessions @ 120,000 per session	#480,000	
h.	Transportation	13 trips	#50,000	Ilorin, Oro, Lafiagi
i.	Research Assistants	6@#15,000 each	#90,000	
j.	Writing Materials for students (Papers, Pen and Pencils)	Paper (10 Reams@ #1300 per Ream) Pen (32 Cartons@ #1200 per Carton) Pencil (125 packs@ #100 per Pack)	#63,900	Nexus Paper, Lucky and HB pencil

Contingencies

I.	Purchase of gigabytes for browsing	5.5 GB @ #4,000 per months for 38 months	#152,000	Gigabytes from 9mobile
II.	Others e.g Accommodations feeding e.t.c	#150,000	#150,000	

Grand Total: #2,981,900

APPENDIX VIII

TIMELINE

	27th Oct., 2013	27th Nov., 2013	27th Dec., 2013	27th Jan., 2014	27th Feb., 2014	21st Mar., 2014	27th April, 2014	27th May, 2014	27th June, 2014	27th July, 2014	27th Aug., 2014	27th Sept., 2014	29th Oct., 2014	27th Nov., 2014	27th Dec., 2014	27th Jan., 2015	27th Feb., 2015	27th Mar., 2015	27th April, 2015	11th May, 2016	27th June, 2016	27th July, 2016	27th Aug., 2016	27th Sept., 2016	27th Oct., 2016	27th Nov., 2016	27th Dec., 2016	27th Jan., 2017	27th Feb., 2017	21st Aug., 2017
MONTHS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	32	33	34	35	36	37	38	39	40	41	47
TASKS																														
Submission of synopsis																														
Survey of literature																														
Protocol Writing																														
Protocol Defense																														
Data Gathering																														
Thesis Writing																														
Writing the Introduction																														
Revising the Introduction																														
Writing the Methodology																														
Revising the Methodology																														
Editing the Protocol																														
Field																														
Computing and Analysing the Statistics																														
Computing Results																														
Revising Results																														
Discussing the Findings																														
Revising the Discussion on findings																														
Drawing Conclusions																														
Revising Conclusions																														
Thorough Editing of the Whole Thesis																														
Writing the Front Matters																														
Revising the Draft of the Front Matters																														
Sending Written Abstract to PG School for Final Defense																														
Waiting period																														
Town-Hall Defence																														
Final Printing, Binding and Clearance.																														