EFFECTS OF BOTTOM-UP AND TOP-DOWN READING STRATEGIES ON STUDENTS' READING COMPREHENSION ACHIEVEMENT OF JUNIOR SECONDARY SCHOOL II STUDENTS IN ZARIA EDUCATIONAL ZONE

BY

DURU Helen Ifeoma

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DEPARTMENT OF ARTS AND SOCIAL SCIENCE EDUCATION
FACULTY OF EDUCATION
AHMADU BELLO UNIVERSITY,
ZARIA

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DECLARATION

I declare that the Thesis entitled "Effects of Bottom-up and Top-down Reading Strategies on the Reading Comprehension Achievement of some JSS II Students in Zaria Educational Zone of Kaduna State" has been carried out by me 'Duru Helen Ifeoma (M.ED/EDUC/4123/2011-2012)' under the supervision of Professor I.A. Olaofe and Dr R. Jibir-Daura. The information derived from the literatures has been properly recognized in the text and in the list of references provided. It has never been presented anywhere for the purpose of the higher degree or diploma in any institution.

…….. .....

Duru Helen Ifeoma Date

CERTIFICATION

This thesis work entitled "Effects of Bottom-up and Top-down Reading Comprehension Strategies on the Reading Achievement of some JSS II Students in Zaria Educational Zone of Kaduna State" by Duru Helen Ifeoma meets the regulation governing the award of a Master Degree in Education (MEd TESL) of the Ahmadu Bello University Zaria, and is approved for its contribution to knowledge and literacy presentation.

…… ……
Prof I.A. Olaofe Date
(Major Supervisor)

…….. ……
Dr R. Jibir-Daura Date

…… ……
Prof F.K.M. Koya Date
Head of Department

…… ……..
Prof Bala Kabir Date
Dean School of Postgraduate

…… ……
External Examiner Date

DEDICATION

This research work is dedicated to my husband, Mr. Joseph Duru and my lovely children.

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I sincerely thank God Almighty for His grace and love towards me. May His mighty name be glorified forever.

I salute you Professor Isaac. A. Olaofe and Dr. Ramlatu Jibir-Daura, my amiable supervisors. I have no words enough to say thank you, but I pray you accept my sincere gratitude for your training, tutoring and concern on this work.

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ABSTRACT

This study examined the effects of bottom-up and top-down reading strategies on the students' reading comprehension achievement of some JSS II students in Zaria Inspectorate Zone, in Kaduna State. The purpose was to determine the reading comprehension strategies (bottom-up or top-down) that has more effect on students' reading performance and to use the findings as basis for making useful recommendations to help direct or redirect the approach to teaching reading comprehension not only in Zaria Inspectorate Zone but the nation as a whole. The study has a total population of 6,883 students and the sample size of 120 students which were randomly drawn from three junior secondary schools across the study area. The study employed a pretest-posttest experimental design method where the performance of the three groups of subjects (bottom-up, top-down and control groups) was measured before and after the treatment. Reading comprehension achievement test was used to teach the experimental groups, while the control group was exposed to the same passages but taught traditionally. That is, the bottom-up group was treated with bottom-up reading comprehension strategies; the top-down group was treated with top-down reading comprehension strategies while the control group continued with their normal reading comprehension lessons on the school time table. After administering the pre-test, eight weeks were used for the treatment. Post-test was also administered to the three groups and the results were used to compare between the results of the bottom-up, top-down and control group. Three research questions were asked, and three hypotheses generated. These were statistically tested at 0.05 levels of significant employing t-test inferential statistics and the analysis of variance (ANOVA). The result showed that teaching reading comprehension using top-down reading comprehension strategies is relatively more effective for students' comprehension than using bottom-up to teach reading comprehension. However, the bottom-up group performed better than the control group. The study therefore, recommends that both bottom-up and top-down reading comprehension strategies should be included in the junior secondary school curriculum. Bottom-up reading strategies should be used especially when teaching vocabularies, bringing out phrases and topic sentences since it was effective on the learners' performance while top-down reading strategies should be used in teaching areas like contextual guessing and inferring meaning.

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LIST OF ABBREVIATIONS

AN OVA	Analysis of Variance
ELL	English Language Learner
EG1	Experimental Group One
EG2	Experimental Group Two
CG	Control Group
XBUPS	Bottom-up Processing Strategy
XTDPS	Top-down Processing Strategy
Xo	Conventional Strategy
O1, O3 & O5	Pre-test
O2, O4 & O6	Post-test
L2	Second Language

DEFINITION OF TERMS

The following are definitions of operational terms used in the study:

Bottom-up: Bottom-up reading processing approach begins from the lower to the higher level and it focuses on language elements such as grammar, vocabulary and cohesion.

Top-down: Top-down reading processing approach focuses on background knowledge about contents and organization. Reading according to this approach is seen as a psycholinguistic guessing game. That is, it focuses on the reader and the whole language approach to teaching reading is used.

Comprehension: This refers to the ability of junior secondary school students to read, understand and interpret what is read through answering comprehension questions.

Literal level of comprehension: It refers to understanding the surface meaning of the text. Questions can be asked to find information and ideas explicitly stated in the text.

Interpretative level of comprehension: This refers to a level where students go beyond what is said and read for deeper meanings such as bringing out facts and opinion from a text. It involves more than a literal understanding.

Inferential level of comprehension: This builds on facts in a text by using prediction to bring out the main ideas in a text.

Critical level of comprehension: Critical comprehension involves asking the students to offer their own opinion.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Reading is a complex and lifelong activity. The goal of reading is to construct meaning based on visually encoded information. It is a sensory process, communication process, language process and interactive process (Olaofe and Masembe, 2006). Those who enjoy reading derive pleasure and satisfaction from it. Adigun and Oyelude (2003) observe that the skill of reading will not only assist learners in organizing their thoughts and jotting down important facts while reading, but also equip them to comprehend the entire text. Rivers (1981) propounds that reading is the most important activity in any language class, not only as a source of information and a pleasurable activity, but also as a means of consolidating and extending one's knowledge of the language. Strevens (1977) also emphasizes the great importance of reading to the learners for two reasons: "firstly, this skill provides the learners with access to a great quantity of further experience of the language. Secondly, it presents a window to the normal means of continuing the learners' personal education by reading skill''. Through reading skill, the learners would be able to develop a sufficient language base that enables them to produce the spoken or written messages which they are eager to communicate to others.

Comprehension involves the ability to understand the intended messages of a text. It is the understanding and interpretation of what is read. One big part of comprehension is having sufficient vocabulary or knowing the meanings of enough words (Reading Rocket, 2011). More so, reading comprehension is a way of talking about whether or not a child has understood what he has read. Brummit-Yale (2012) states that reading comprehension is an intentional, active,

interactive process that occurs before, during and after a person reads a particular piece of writing. Again, reading comprehension refers to constructing the meaning of the oral or written messages. It is the level of understanding of writing, normal reading rates (around 200-220 words per minute), an acceptable level of comprehension is above 75% (Dictionary.com, 2013).

This study focuses on determining the effect of bottom-up and top-down reading strategies on the reading achievement of some selected junior secondary schools (JSS) students in Zaria Inspectorate Zone. The study intends to find out whether texts can be better comprehended when students read and answer comprehension questions using either bottom-up or top-down reading strategies. By bottom-up reading approach, the study means that meaning resides in the graphic symbols the writer uses in encoding the message. That is, it is a process where readers focus on letters, sounds, syllables, words, phrases, sentences and paragraphs (Olaofe and Masembe 2006; Iwai 2010). Whereas top-down reading approach is a model that operates on the principle that comprehension of written text starts from the higher level stage (a stage where readers use their knowledge and experience in order to make predictions or hypotheses about the meaning of the text) of understanding down to the text being read. That is, rather than focusing on individual words or analyzing how each word is structured, readers emphasize the whole text passage and look for the key information by activating prior knowledge and compensating for meanings of unknown vocabulary. In fact, it is seen as a method that uses extensive knowledge of the context of the input and conceptual expectations based on previous events to fit new information into an existing framework (Rau and Jacobs 2013). Reading strategies play a decisive role for language acquisition and most second

language speakers face trouble in understanding reading activities, bottom-up or top-down reading strategies can help them to acquire language.

More importantly, interactions, literatures and interviews have revealed that there is a divide in terms of the level suitable for teaching reading comprehension using bottom-up and top-down reading strategies. Some are of the opinion that in bottom-up reading strategy students must decode letters and words before they are able to construct meaning from sentences, paragraphs, and larger text selections. Consequently, they view reading acquisition as mastering and integrating a series of word identification skills (Pearson 2014, Nounoul 2013, Olaofe and Masembe 2006). They believe that a break in teaching students using bottom-up reading strategies makes them become poor readers in terms of pronunciation of speech sound and better comprehension of texts. To others, top-down reading strategy should be used to teach learners rather than bottom-up reading strategy (Goodman 1967; Harris, 2005; Rajabi, 2009; Smith, 1985). They believe that students read to learn, that is, readers emphasize the whole text passage and look for the key information by activating their prior knowledge and compensating for meanings of unknown vocabulary. More importantly is the group who strongly agree on integrative method. That is, both bottom-up and top-down can be used in a lesson throughout secondary schools. They see nothing wrong when both strategies are used to teach reading comprehension as they serve as a means of equating students' weakness in reading. There has also been some disagreement among scholars as to whether top-down or bottom-up are more effective for building reading comprehension in students. Other studies suggest top-down strategies are more effective (Furugori, 1988). It is based on these controversies that this work investigates the effects of bottom-up and top-down reading strategies on the reading achievement of some Junior Secondary School Students in Zaria

Inspectorate Zone so as to come out with the appropriate strategy that would enhance students' ability to read and comprehend any given text.

Looking at the rate at which students fail to read (poor reading habit) or read without understanding, it is important to note that poor answering of comprehension questions is as a result of lack of adequate knowledge of reading strategies that will help them to answer comprehension questions correctly. This has led them into carrying over their poor performance from junior secondary to senior secondary schools.

Again, English language teachers have shown their concern over the inability of students to read comprehension passages and answer the questions correctly. In fact, some said that finding ways to engage students in reading with an adequate reading strategy may be one of the most effective ways to leverage social changes (Alawiye, Owolabi and Olagesin 2000). As a result, the researcher believes that either bottom-up or top-down reading strategies could be of immense help to the teachers of language in tackling this problem. Strevens (1977) also emphasizes the great importance of reading to the learners for two reasons: "first of all, this skill provides the learners with access to a great quantity of further experience of the language. The second reason is presenting a window onto the normal means of continuing the learners' personal education through reading skill." Through an appropriate reading strategy, the learners would be able to develop a sufficient language base that enables them to produce the spoken or written messages which they are eager to communicate to others. Chastain (1988) believes that "without this knowledge, students are not likely to be successful in the typical language class in which all four language skills are stressed". In fact, it is in this light that the present researcher feels there is need to show how the application of bottom-up or top-down reading strategies can contribute to students reading achievement. This is in a bid to improve the proficiency of the

Nigerian students in English Language through utilization of the better of the two strategies to improve reading. The researcher is of the opinion that Nigerian students, most especially the subjects in focus have to be equipped with the right strategies of reading comprehension passages so as to enable them benefit much from reading and comprehending. With the knowledge of the most effective out of the two reading strategies, that is bottom-up and top-down, they could read and understand any text.

Another phenomena that inspired the researcher for the study is borne out of the desire to find out the causes of the high rate of students' failure in answering reading comprehension +questions. Many students' performance in reading and answering comprehension questions is generally very poor and disturbing, and as a result, the researcher feels there is need to find out the ways bottom-up or top-down reading strategies can foster or improve students' performance in reading and answering comprehension questions since reading comprehension is a language tool used in testing comprehension. It is clear that students need to know the right strategy to employ when reading any subject or face standardized examinations like Basic Education Certificate Examination (BECE) and those in higher secondary schools. This, undoubtedly, shows why this study is well-timed as the outcome would bring about a balanced way of teaching reading comprehension in Zaria Inspectorate Zone and the nation at large.

1.2 Statement of the Problem

The role of bottom-up and top-down reading strategies in reading comprehension passages among Nigerian junior secondary school students is obvious. The problem under consideration in this study is the effects of bottom-up and top-down reading strategies on students' reading comprehension achievement of junior secondary school II students in Zaria

Educational Zone. The researcher wonders if top-down reading strategy is used in teaching reading for comprehension as it seems, there is no time allocated for it even though there is time for reading comprehension.

Again, interaction with some teachers of English language in some secondary schools in Zaria shows that they use bottom-up and top-down reading strategies simultaneously in a lesson. This is because they seem not to have a grasp of the purpose of teaching reading comprehension using these strategies. It is based on this that Adeniji (2000) says that some English teachers are lagging behind in their approach to teaching reading comprehension and the effect is poor performance among students. This study desires to bring to light the main objectives of teaching reading comprehension using either bottom-up or top-down reading strategies from investigation.

Also, many students are novice when it comes to knowing the best reading strategies (bottom-up or top-down) that enhances their ability to comprehend a text adequately. Researchers also differ regarding the level or class appropriate for teachers to apply any of the strategies as can be seen in the literatures reviewed in this work. The debate on the best reading comprehension strategy has made studies on bottom-up and top-down not leading to a conclusion. This suggests the need for this study to empirically show whether bottom-up or top-down is the better strategy in reading comprehension teaching.

Hence, this study wants to provide solution s to these controversies with the hope that it might bring a balanced in the strategies to employ when teaching reading comprehension using bottom-up or top-down reading strategies.

1.3 Objectives of the Study

This study is designed to:

i. investigate the effects of bottom-up reading comprehension strategies on the reading achievement of Junior Secondary School II students in Zaria Educational Zone;
ii. investigate the effects of top-down reading strategies on the reading achievement of Junior Secondary School II students in Zaria Educational Zone; and
iii. determine the effect of bottom-up and top-down reading strategies on the reading comprehension achievement among Junior Secondary School II students in Zaria Educational Zone.

1.4 Research Questions

This study seeks to answer the following questions.

i. What is the effect of bottom-up reading strategy on the comprehension achievement of junior secondary school II students in Zaria Educational Zone?
ii. What is the effect of top-down reading strategy on the comprehension achievement of junior secondary school students in Zaria Educational Zone?
iii. Which of the two (bottom-up or top-down reading strategy) has more effect on students' reading performance?

1.5 Research Hypotheses

Below are the null hypotheses generated for the study.

i. There is no significant difference between the reading performance of students taught using bottom-up reading strategies compared with the control group in the study area.
ii. There is no significant difference between the reading performance of students taught using top-down reading strategies compared with the control group in the study area.

iii. None of the strategies has more effect on students' reading performance.

1.6 Significance of the Study

This study is significant because teachers of English language at the junior secondary level seem to be confused concerning the best strategy for teaching reading comprehension in Secondary Schools in Zaria Educational Zone, Kaduna State. During an interactive session between the researcher and some teachers, the researcher understood that some of them see bottom-up as a better reading comprehension strategy than top-down reading comprehension strategy. This brought about the need for this study to find out which strategy is the best for teaching reading comprehension. As such, the findings of this work could bring a better understanding of the strategy for teaching reading comprehension in Junior Secondary Schools.

Again, students' ability in reading with understanding would be enhanced in English, together with other subjects, when they are taught using the right strategy. It would help students whose comprehension capacity is low, average or high because some useful reading strategies that would boost their comprehension abilities have been explained in details in either bottom-up or top-down reading strategies in the chapter two of this research work. This is true because by the time students are exposed on how to draw inferences, predict or guess, generate questions from text; comprehension of a text would be achieved. Hand in hand with that, if the students are able to comprehend texts, they could interpret questions of tests and bring out meanings beyond the literal level. This would go a long way in helping them to come out with flying colours in the termly and the junior school certificate examinations.

Furthermore, the study would help examination bodies' and curriculum planners, especially with the new system of education, to design the curriculum that will reflect the objective and purpose of teaching reading comprehension with either bottom-up or top-down

reading strategies together with the phase that they would be introduced to the students. This could bring about uniformity in the procedures of teaching reading comprehension passages using the curriculum of the junior secondary schools in Zaria educational Zone and the nation at large. Some areas in English language reading comprehension passages like vocabulary building, word matching or activating prior knowledge, to mention but a few, would immensely help the curriculum planners and examination bodies when setting examinations for the students if found to be effective. In essence, the study would minimize the interactive effects that might adversely affect the result of the experimental groups since the study is experimental.

The findings and discussions of the theoretical and practical implications from this study would contribute to researchers in second language learning as it relates to reading comprehension strategies.

1.7 The Scope of the Study

The scope of this study centres on bottom-up and top-down reading comprehension strategies. This is because there seems to be controversies on which of the strategies (bottom-up or top-down) enhances learners' ability to comprehend texts (Carrell, 1988; Goodman, 1970).

The study was carried out using control and experimental groups at pre-test and post-test stages in the secondary schools. The study selected three junior secondary school II students in Zaria Educational Zone of Kaduna State and they are: Government Junior Secondary School Aminu, Government Junior Secondary School Tudun-Jukun and Government Junior Secondary School Gyallesu. The schools were randomly selected based on

the purposive random sampling to enable the researcher to adequately monitor the teaching process, administering of instruments and collection of data without any difficulty.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter presents the view of scholars on bottom-up and top-down reading processing strategies as it concerns the one that develops and enhances the comprehension achievement of junior secondary school II students, in Zaria Educational zone. It is written under the following headings: the concept of reading comprehension, the traditional theory: bottom-up reading processing strategies which includes print awareness, letters, phonemic awareness, decoding and practice and the knowledge of syntax. The cognitive theory: top-down reading processing strategies which include predictions, generating questions from a text, determining importance, drawing inferences and summarizing information. This chapter also covers areas of similarities and differences between bottom-up and top-down reading processing strategies, previous studies on bottom-up and top-down reading processing strategies, the conceptual framework, cognitive academic language learning approach (CALLA), previous studies on bottom-up and top-down reading processing strategies and the gains from the review of related literature and finally a summary of the chapter.

2.2 The Concept of Reading Comprehension

Comprehension is the reason for reading. Good readers are both purposeful and active, and have the skills to absorb the text they read, analyze it, make sense of it, and make it their own. To be able to accurately comprehend a passage, students need to decode what they read, make connections between what they read and what they already know and think deeply about what they have read. Brown (2007) identifies comprehension as “the process of receiving

language; listening or reading input. Comprehension is the ability to take in information, analyze it in its respective segments, and come up with an understanding of the input in a cohesive and accurate manner. Well-developed comprehension abilities involve interactive strategy's use to come up with a meaningful understanding of the input (Lin, 2010). Therefore, comprehension may not be exclusively devoted to input alone; it may also affect the fluency of a learner's output. Traditionally, comprehension has been viewed as a reader's capacity to replicate a text (e.g. in summaries of facts, translations, or matching exercises). However, in recent years, considerable research effort has focused on a conceptual model. Adekoya and Arua (1997) believe that many bilingual students fail to comprehend what they read in the school situation because they lack the vital reading strategies necessary to acquire knowledge and general information from text.

Comprehension also means building up meaning from words; it is central both to academic and lifelong learning. According to Snow (2002), reading comprehension is the process of simultaneously extracting and constructing meaning through interaction, and involvement with written language. It consists of three elements: the reader, the text and the activity or purpose for reading. It is a process in which readers filter understanding through the lens of their motivation, knowledge, cognitive abilities and experiences. Effective readers have a purpose for reading, and use their background knowledge and experiences to relate to the text: readers don't comprehend unless they draw connections between what they read and their background knowledge (Tankersley 2003).

Furthermore, Pang, Muaka, Bernhardt, and Kamil (2003) described reading comprehension as an active process a reader uses to construct meaning from a text. This process which consists of using an interaction between a prior knowledge, and drawing

inferences from the different words and expressions the writer uses, in order to comprehend information, ideas and viewpoints. Smith (1985) also believes that reading comprehension involves bringing a prior knowledge interacted with what s/he is reading, so that s/he can achieve comprehension.

From the literature reviewed on the concept of reading comprehension, it is strongly assumed that extracting and building of meanings from words, the use of background knowledge and experiences can aid students to read comprehension passages with better understanding. This is true because the interest of reading goes beyond saying what series of prints are, thus, students are expected to answer comprehension questions correctly and their answers or responses would show whether they understand what they have read because the questions will go beyond literal meaning to inferential, interpretative and critical. The role of background knowledge cannot be overemphasized in comprehension, it helps students to use their experiences and knowledge of the world, vocabulary and language structure to make sense of the text and know how to get the most out of it.

2.3 Theoretical Framework

The theoretical framework adopted for this work draws from two learning theories: the traditional and cognitive theories.

2.3.1 The Traditional theory

In the traditional theory, reading is seen as a linear process by which readers decode a text word by word, linking the words into phrases and then sentences. According to the proponents of this theory, Pardede (2010) says that readers acquire a set of hierarchically ordered sub-skills that sequentially build towards comprehension ability. Having mastered these skills, readers are viewed as experts who comprehend what they read. In this theory,

information is received and processed beginning with the smallest sound units and proceeded to letter blends, words, phrases, and sentence. Consequently, readers are seen as passive recipients of information in the text, that is, meaning resides in the text and the reader has to reproduce it.

Again, the proponents of this theory describes information flow as a series of stages that transforms the input and passes it to the next stage without any feedback or possibility of later stages of the process influencing earlier stages (Stanovich, 1980; in Pardede , 2010). Scholars, in this view believe that most activities are based on recognition and recall of lexical grammatical forms with an emphasis on the perceptual and decoding of a series of written symbols and reproducing them into aural equivalents in the quest for making sense of the text.

The review of the traditional theory vividly shows that meaning exists in the printed page and must be interpreted by the reader. This shows that reading comprehension can be taught via bottom-up reading processing strategy. In this way, through bottom-up processing, the input data are automatically propagated up the hierarchy toward more meaningful or comprehensive levels of representation. This theory helped the present researcher not to deviate from the printed symbols presented in the passage used in this study.

2.4 Bottom-up Reading Processing Strategies

In bottom-up reading processing strategies, readers must first identify linguistic signals such as "letters, morphemes, syllables, words, phrases, grammatical cues, or discourse markers" (Brown, 2007; Gough, 1985). Then they use their mental data-processing device to put these signals in order. During the data-processing, students need to know the complexities of the language system especially in the area of phonology and syntax. Some researchers in psychology claim that bottom-up model is described as being "data driven'' and these data refer to letters and words, which are written on the page.

Dechant (1991); Olaofe and Masembe (2006) are of the opinion that the bottom-up models are those models which operate on the principle that the written text is hierarchically organized on the grapho-phonic, phonemic, syllabic, morphemic, word and sentence levels and that the reader first processes the smallest linguistic unit which is morpheme and it gradually compiles the smaller units to decipher and comprehend the higher units (e.g., sentence syntax). This suggests that bottom-up reading strategy sees reading as a process of sensing print on the retina, analyzing letter features and letter clusters, detects and combines letters into words, arranging words into phrases and sentences, associating meaning with these sentences and storing and reasoning with these meanings. In fact, it is based on text or data–driven operations. It has been observed that letters, words and language features in the text are decoded while reading and through this process, the reader is considered as a scientist with a magnifying glass examining the details.

More so, this strategy mainly stresses on literal comprehension, surface meaning, translation into L_1 and use of dictionary which have specified this model again as "data driven". It is a kind of approach where teachers ask students to find information and ideas that are explicitly stated in the text. Bottom-up processing approach is an approach for processing a text in which the reader builds up a meaning from the blank marks and page: recognizing letters, letter clusters, words, phrases, sentences and finally meaning which is the order of bottom-up model for achieving comprehension (Anderson, 2003a; Nuttall, 1996).

Moreover, the traditionalists' view of reading is a bottom- up or data driven processing model. In this view of reading, letters are perceived in a left to right sequence until a word is perceived as a whole; meaning is obtained and related to other words in the sentence, thus activating the dominant schema and its particular concepts. (Omaggio, 1993).

Interestingly, bottom-up approach goes a long way in developing the reading skills of the learner with the help of the reading activities carried out in the language skills. In recent times, the main method associated with the bottom-up approach to reading is known as phonics, which requires the learner to match letters with sounds in a defined sequence. According to this view, reading is a linear process which readers decode a text word by word, linking the words into phrases and then sentences (Gray and Rogers, cited in Kucer 1987). Samuels and Kamil (1988) lay emphasis on how behaviourism treated reading as a word-recognition response to the stimuli of the printed words where little attempt was made to explain what went on within the mind that allowed the human to make sense of the printed page. Meanwhile, textual comprehension involves adding the meanings of words to get the meaning of the clauses.

Stanovich (1980) is of the opinion that bottom-up approach describes information flow as a series of stages that transforms the input and passes it to the next page without any feedback or possibility of later stages of the process influencing earlier stages. That is, language is viewed as a code and the reader's main task is to identify graphemes and convert them into phonemes. Consequently, readers are regarded as passive recipients of information in the text and meaning resides in the text and the reader has to reproduce it.

Again, bottom-up approach focuses on language elements such as grammar, vocabulary and cohesion (Nounoul, 2013; Chall, 1967 cited in Osborne, 2012). It is the ability to decode or put into sound what is seen in a text. In the same vein, James (2012) in ESL 009 Final Papers (2012) says that in this approach L2 learners focus on the basic blocks such as sounds, letters, sentences, paragraphs and the text as a whole. If they learn these components, they will acquire the language because they are the building block of it. It is worth adding that the bottom-up

model is satisfactory when we are taught vocabulary and organization of a text but this gives us no assurance that the reader will be able to process the codes words both rapidly and accurately when reading. It should also be emphasized that L2 readers are frequently panicked by unknown words in the text, so they stop reading to look up for new words thereby interrupting the normal speed and act of the reading process. It also helps the L2 learners by giving an opportunity to know that the basic components of the language are vital for acquisition of the language.

More importantly, teachers who possess a bottom-up reading approach strongly agree that students must decode letters and words before they are able to construct meaning from sentences, paragraphs, and larger text selections. Consequently, they view reading acquisition as mastering and integrating a series of word identification skills. Letter-sound relationships and word identification are emphasized instructionally. Because recognizing each word is believed to be an essential prerequisite to being able to comprehend the passage, accuracy in recognizing words is seen as important.

If one agrees with bottom-up approach, one may consider the practice of correcting oral reading errors as important in helping children learn to read. In other words, one may believe that helping students read a passage over and over is an important instructional activity because they develop accurate word recognition. The bottom-up theorists often emphasize the teaching of skills in a sequential and systematic manner. Pearson (2014) says that bottom-up theories of the reading process depend on phonetic awareness and word-by-word decoding strategies. This is like solving a puzzle piece early reading skills build upon each other until students are reading with fluency and high levels of comprehension. Some bottom-up strategies are:

2.4.1 Print Awareness

Before students can learn to read, bottom-up theorists believe they must develop print awareness. Pre-readers must understand that the shapes and lines on a page represent letters and when put together, represent different words. Once students learn that print is read from left to right, top to bottom, and that there are spaces between words, they can begin to understand that words in print convey meaning.

2.4.2 Letters

Some phonemes are represented by a combination or cluster of letters. Bottom-up reading strategies help students learn letter recognition while developing print awareness. As they begin to recognize and identify letters, teachers begin developing students' phonetic awareness. Students then learn to pronounce common letter combinations, such as ''th'' or ''st''. They learn to recognize similar words with differing pronunciations, such as ''baked'' and ''naked'', and words with multiple spellings or expectations to common phonetic rules (Reyhner, 2008).

2.4.3 Phonemic Awareness

Even though the concept described is quite simple and straightforward, the term phonemic awareness is often used in ways that can create confusion. To read a language that uses an alphabet, a student must understand that spoken language is made up of segments of sound, the smallest of which is called a phoneme. These small segments of sound are difficult to hear in spoken language because natural speech blends them together to form words that sound as if they are whole units. For example, the word *cat* is made up of three phonemes /c/, /a/, and /t/. The word *though* has only two phonemes /th/ and /o/. These examples highlight the fact that phonemes refer to sounds, not to letters. In other words, there is not a one-to-one

correspondence between phonemes and letters because some phonemes are represented by a combination or cluster of letters. Teachers who help students learn to associate letters with sounds and to blend those sounds to form words during phonics instruction are providing a form of phonemic awareness training.

Similarly, phonemic awareness is developed when spelling instruction which involves teaching students to break words into their component sounds (phonemes) and match those sounds to letters. The National Reading Panel (2013) stated that although "teaching children to manipulate sounds in spoken words may be new, phonemic awareness training that involves segmenting and blending with letters is not. Only the label is new". Phonological awareness also refers to the ability to attend to the sounds of language as distinct from its meaning. Studies of both alphabetic and non-alphabetic languages show that phonological awareness is highly correlated with reading ability. For alphabetic languages, phonemic awareness is especially important because the letters of the alphabet map onto individual sound units (phonemes). Children who are able to attend to the individual phonemes in alphabetic languages are much more likely to learn the alphabetic principle (how letters map onto phonemes) and, therefore, learn to recognize printed words quickly and accurately (Pang, Muaka, Bernhardt, and Kamil 2003).

2.4.4 Decoding and Practice

Decoding is a major piece of the puzzle for students learning to read using bottom-up theories. Once they have developed phonetic awareness, students begin decoding by sounding out each letter or letter combination in a word. As they learn to read several simple words, students practise reading simple stories. They learn to sound out increasingly difficult material by sounding out letters in a word, one word at a time. Though the decoding process can be slow

at first, readers begin to automatically recognize some words. Students must know how to blend isolated sounds into words and they must know how to break words into their component sounds. Secondary school students who do not know letters and sounds will need special catch-up instruction by the researcher because failure to learn to use spelling/sound correspondences to read and spell words is shown to be the most frequent and debilitating cause of reading difficulty (Reading Rockets, 2010). Learners that have deficiency in reading and comprehending need more systematic instruction in 'word-attack' strategies.

2.4.5 Knowledge of Syntax

Readers must process syntax to impose meaning on the recognized words (Urquhart and Weir, 1998). Syntax is the component of a grammar that determines the way in which words are combined to form phrases and sentences (Radford, 2004). In L2 reading, syntactic knowledge is crucial for successful text processing and has been included in many models of the L2 reading processes (e.g., Hudson, 1996; Alderson, 2000; Grabe, 1991; Koda, 2005). Vogel (1975) in Martohardjono, G. Otheguy, R. Gabriele, A. Goeas-Malone, M. Malgosia Pyrzanowski, M. Troseth, E. Rivero, S. and Schutzman, Z. (2005) demonstrated that in reading, impaired children had deficits in areas measuring "the syntax of expressive language" and found a significant correlation between productive syntax scores and reading comprehension scores, while Anderson (1982) revealed that poor readers exhibit syntactic deficiencies in the written language. The unskilled readers do not experience deficits in representing or processing syntactic information but do experience difficulty in processing and retaining phonological information in working memory. This deficiency occurring at the level of working memory keeps information from being delivered at the necessary pace and with the required precision for higher level processing. For example, Shankweiler and Crain (1986)

propose that difficulty in the processing of complex syntactic structures should be interpreted as difficulty at the phonological rather than the syntactic level.

However, bottom-up reading strategy has its challenges, the teachers using the strategy emphasize decoding skills and spend almost no time helping emerging readers recognize what they bring to the information on the page (Abraham, 2000). The approach gives emphasis for the smallest block of the language. That is, it goes from part to whole. Another limitation of bottom-up theories of the reading process is that readers will not be able to compare their knowledge and background experiences to the text in order to understand the author's message (Reutzel and Cooter 2013). Again, this strategy of reading has almost always been under attack as being insufficient and defective for the main reason that it relies on the formal features of the language, mainly words and structure. Although it is possible to accept this rejection for the fact that there is over-reliance on structure in this view, it must be confessed that knowledge of linguistic features is also necessary for comprehension to take place. To counteract over-reliance on form in the traditional view of reading, the cognitive view was introduced (Pardede, 2010).

The review of bottom-up strategy is of immense importance to the present study as it guides the researcher on the roles of print awareness, decoding and practice and syntax in text comprehension. Since reading is a process of decoding writing symbols into their aural equivalents, it is a text-centered move in which texts are the containers of rules and codes to be deciphered. Specifically speaking, in this lower-level reading, according to Grabe (1991), readers are passive recipients of textual information and this shows that there is little input by way of cognitive contribution as all that the readers need to understand a text is supplied in it. This shows that inferential and critical comprehension will not be achieved when this model is

used in teaching reading comprehension. Notwithstanding, literal meaning of comprehension is possible and the approach would help readers to gain enough skills in understanding language elements such as grammar, vocabulary and cohesion.

2.5 The Cognitive theory

The cognitive theory is in direct opposition to the traditional view. The view is based on schema theory which emanates from the constructivist theory of Bruner in 1960. The major theme in this theoretical framework is that learning is an active process in which learners construct new ideas or concepts based upon their current or past knowledge. Schema theory agrees that readers interpret text based on whatever prior knowledge they bring to their reading task. This prior knowledge includes experience they have in their lives, their social values, their attitudes and beliefs, formal schemata that is; knowledge about structures and conventions of a language, their content-area knowledge, and their linguistic knowledge at all levels. It is this knowledge that influences their interpretations in reading. Some aspects of knowledge may enhance encoding and meaning construction abilities at the textual level; some aspects may enhance higher-level interpretations (Carrell & Eisterhold, 1993; Anderson, 1994). A crucial idea for a schema-theoretic account of reading comprehension is that it involves the coordinated activity of schemata at all levels of analyses. As schemata at the lower levels (e.g., visual features) are activated, they are bound to and thus evoke schemata at the next, higher level (e.g., letters); as these schemata are activated, they, in turn, trigger their own superordinate schemata (e.g., words). At the same time, schemata at higher levels are competing to fill their slots with elements from the levels beneath through top-down processing. A necessary assumption here is that schemata exist at all levels of abstraction (Aoelson, 1975; Rumelhart & Ortony, 1976).At the letter level; the schematic descriptions may

be relatively concrete and specific. For example, the schema for an uppercase K-13 - might consist of three subschemata: (1) a vertical line on the left; (2) an oblique line extending upwards from near the center of the vertical line to a point to the right of and perpendicular with the top of the vertical line; and (3) a second oblique line extending downwards from somewhere along the bottom half of the first oblique line to a point directly beneath the top end of the first oblique line and perpendicular to the bottom of the vertical line.

Therefore, in learning to read especially in a second language reading, it is crucial for readers to know what prior knowledge they have such as about the topic, the organization of ideas, or language used in the text. They also need to know how and when they can connect such knowledge to enhance their reading which is known as reading strategic behaviour (Carrell, 1993).

A fundamental assumption of schema-theoretic approaches to language comprehension is that spoken or written text does not in itself carry meaning. Rather, a text only provides directions for the listener or reader as to how he should retrieve or construct the intended meaning from his own previously acquired knowledge. The words of a text evoke in the reader, associated concepts, their past interrelationships and their potential interrelationships (Adams and Collins, 1997).

This theory stands as the foundation on which this study draws the concept of teaching reading comprehension passage using top-down reading processing strategy since the students were actively involved unlike the bottom-up model that sees learners involvement passively. This theory also guides the researcher not to select the passage that is above the learners' ability since it does not see reading as a process of just extracting meaning from a text but a process of

connecting information in the text with the knowledge the reader bring to the act of reading. This explains why Anderson and Pearson (1988) insist that comprehension is the interaction between the old and new information

2.6 Top-down Reading Processing Strategies

In the 1970s, the bottom-up process of reading was challenged by the top-down reading process. The argument was that phonological processing or the ability to decode letters and words are important but not sufficient for proficient reading. Thus, the top-down process proposes that reading comprehension depends almost always on the readers' prior knowledge of the topic of the text. It is believed that the reading process begins in the head of readers, who use their background knowledge to construct the meaning of the text. Mature readers perceive words as different parts of meaning instead of a set of letters and they are able to recognize words almost automatically. Unlike the bottom-up idea which focuses on decoding issues, the top-down view emphasizes using background knowledge, making inferences, interpretations and predictions, drawing conclusions, monitoring comprehension, seeking clarifications and so on, while reading. The top-down model includes skimming, scanning, activating background knowledge, predicting, thinking of the author's main idea, finding clues, contextual guessing and associating image by students which have specified this model of processing as conceptually driven (Harris, 2005; Rajabi, 2009; Smith, 1985). Again, language teachers assist emerging readers recognize what the readers brought to the information on the page by motivating them to activate their background knowledge (Goodman, 1967). Reading strategies, such as prediction, skimming, scanning, inferring, and guessing the meaning of unfamiliar words and self-monitoring are effective reading strategies, which enable EFL learners to achieve comprehension when reading successfully. Top-down processes help the learner to

resolve ambiguities or to select between alternative possible interpretations of the incoming data through the use of contextual guessing.

Top-down reading strategy as the name implies operates on the principle that comprehension of written text starts from the higher level stages of understanding down to the text being read (Olaofe and Masembe 2006). Unlike bottom-up model, top-down model is reader driven because meaning according to this model does not reside in the graphic symbols that make up the text but rather in the mind of the reader. Goodman (1967) is of the opinion that top-down model of reading helps students to focus on what the reader brings to the process. The reader samples the text for information and contrast it with their world knowledge, helping to make sense of what is written. This strategy gives attention for the gist of the written material or listening text rather than for each and individual components. That is why learners using this model are expected to give the meaning of the text they read based on the background knowledge. It helps L2 learners to understand the reading text without worrying about the smaller components of the language. Some top-down theorists call it "automatic method" because it focuses on meaning.

In the same vein, Chall (1967) in Osborne (2012) says that words use Gestalt principles of shape and length, which is to say that meaning is viewed as the goal of reading and the reader uses his prior knowledge and experiences with language through semantic and syntactic cuing in order to make predictions to arrive at the meaning of words in particular contexts. The reader therefore does not use all the elements in a word for decoding but rather uses the most productive clues. It is due to this fact that the strategy is seen as native like strategy which focuses on building, evaluating and reacting to the textual messages. Again, this model starts

from the reader's general knowledge of the world and the given topic. It activates a reader's contextual knowledge which is then used for interpreting the information coming in bottom-up.

More so, Goodman (1967) states that top-down model has recently been characterized as a concept-driven and has the greatest impact on conceptions about native and second language participants in the reading process that is, from earlier views of second language (L2) reading as an active predictive process. As to top-down reading strategy, the prior knowledge is activated which is capable of enhancing learner's language learning and making possible reading comprehension. In other words, in top-down strategy, "content schemata" are to be activated; prior knowledge plays a major role in learner's comprehension. Carell (1998) in Lee (2013) confirms this when he writes that a lack of content schemata activation would lead to insurmountable processing difficulties with second language readers. Hudson (1982) in Lee (2013) has even argued that a high degree of background knowledge can overcome linguistic deficiency. In a study by Row and Rayford (1987) it was observed that in order to help students activate their schema, besides providing pre-reading activities such as using purpose questions as 'pre-passage content-cues', other factors that affect the activation of this strategy includes students' familiarity with topics, amount of information provided and cues to genre of the passage must be considered especially for second language readers.

Anderson (1999), Carrell and Eisterhold (1993) pointed out that although readers persistently bring their background knowledge to their reading tasks, if their existing schema is not appropriate to the particular text they are reading, their meaning making can fail. Therefore, it is important to prepare second language readers to have enough of the relevant background knowledge required by the text so that they can use it as a strategic device to enhance their comprehension. Again, reading experts and researchers have revealed that knowledge of text

structure as one aspect of the reader' schema is important for reading comprehension. In order to comprehend a reading passage effectively, readers need to be able to identify the overall organizational pattern of ideas presented by the author. This knowledge will assist them to perceive the overall connections with the content (Anderson, 1999; Irwin, 1991).

In addition to prior knowledge as a key point, top-down model is actually a whole-language teaching approach and the strategy contains predicting, generating questions from a text, determining Importance, inferring, summarizing information from a text and guessing the meaning of unfamiliar words in a comprehension text among others.

2.6.1 Predictions

Prediction means forecast, that is, a statement that says what you think will happen and the act of making such a statement. Duffy (2003) explained that when readers make predictions of what ideas they will encounter in the text, they increase the potential for effective reading comprehension to take place. Predicting often occurs in tandem with other strategies such as using background knowledge, generating questions, and comprehension monitoring. As readers move on to later parts of the text in a passage, they may also change what they have predicted. Irwin (1991) noted that predictions also depend upon the readers' characteristics. Their background knowledge, goals in reading a given text, and attitudes towards the ideas they learn from the passage influenced their predictions. Irwin also noted that good readers also made predictions of text content using their knowledge about text structure. Predictions stimulate the reader's sense of monitoring and lead the readers to pay close attention to identifying important information. Irwin (1991) concluded that these strategic behaviours make the reading process active and constructive. As Duffy (2003) noted, this strategy of making prediction is fundamental to reading comprehension in both narrative and expository texts. Also, it can be

taught to learners at all levels. He suggested that when students experience a situation where they are uncertain about what they are reading but still try to read without being able to make much sense, they should be guided to use predictions. It should be explained how this strategy is important in enhancing probing for meaning.

Basically, students can be taught to use the topic, textual cues, and pictures to elicit prediction. He asserted that an effective prediction is "a thoughtful hypothesis based on cues". According to Duffy (2003) students can determine what they have predicted and how they make the predictions for example, what cues or background knowledge they use, which will indicates that the instruction of the strategy is successful. Afflerbach's study (1990), on the influence of the prior knowledge and text genre on readers' prediction strategies, concluded that the students made more predictions on the essays and stories with the more familiar contents and structures of the texts. In addition, through making predictions, they also used cues available from their background knowledge to monitor and determine the effectiveness of their suppositions and comprehension. Because using background knowledge is an important reading strategy, it is important that readers have adequate and appropriate background knowledge as a reading tool.

2.6.2 Generating Questions from a text

Again, generating questions during reading helps students move themselves to a higher level of thinking. Duffy (2003) found that good readers generate questions while reading without having to put much effort on it, but poor readers do not have this skill and tend to believe that they will understand the meanings of the text only when they can decode words. He explained that by nature, since generating questions, together with predictions and monitoring, are cognitive activities that normally take place instantaneously and quite

unconsciously and invisibly, it is therefore hard to teach these thinking processes only by giving explanations or by modeling. It is hard for students to mimic the teacher's modeling because the strategy itself requires background knowledge and normally each individual reader has different prior knowledge. Students cannot achieve this skill just by passively seeing the teacher performing it. He insisted that students have to actively practise it. Studies regarding reciprocal teaching provided evidence that training students to actively generate questions together with the other three strategies of summarizing, predicting, and clarifying would help improve students' comprehension because generating questions alone will not be as effective as all strategies are employed together (Brown and Palincsar, 1985; Brown, 1994). Similarly, a review of various reading research studies concluded that students who were trained to use this strategy with well-structured guidance outperformed those who did not receive training. In fact, it was observed that students' success in this strategy application seemed to have a connection with the type of instruction provided to them: "the nature and intensity of the instruction may be critically important" (Dole, Duffy, Roehler, and Pearson 1991). In relation to this issue, from the instructional perspective, Duffy (2003) suggested that using guided and intensive practice, when students become comfortable with this cognitive behaviour, teachers can ask them to report how they have used it and how they related it with other strategies in their reading.

2.6.3 Determining Importance

Determining importance is considered a key top-down strategy for reading comprehension. This strategy includes identifying the gist, main idea, thesis, theme, and or topic sentence. In determining importance, readers generally find either the 'author-determined importance' or the 'reader-determined importance'. Skilled readers are better at identifying the

author-determined importance. In doing this, they use three aspects of knowledge, namely the general and domain specific knowledge, the knowledge about the author's goal and intention, and knowledge of text structure (Dole, Duffy, Roehler, and Pearson 1991). However, Duffy (2003) pointed out that this strategic behaviour can also be difficult for many readers, for various reasons. First, not all of main ideas in expository text are presented in topic sentences, and not all narrative stories have clear themes. Readers need to derive the implied main ideas using information provided in a given context. This process requires other related strategies such as questioning and inferring from background knowledge. Moreover, a main idea that the reader has already predicted at one point during reading may have to be altered as he or she encounters new information. In sum, this strategy entails the reader's interaction with the author's intentions and the reasoning skills to determine how the provided clues help confirm the main ideas he or she has identified. Because of its essential role to enhance an understanding of the general ideas of the text, and the fact that it demands cognitive skills of multiple strategic behaviours, Dole, Duffy, Roehler, and Pearson (1991) reiterated the generally agreed-upon view that this strategy needs to be taught to students. Indeed, studies have also shown that students who were taught explicitly how to determine important (or unimportant) ideas comprehended better (Bauman, 1984; Wade and Trathen 1989).

2.6.4 Drawing Inferences

Another strategy is drawing inferences; it is the ability to read between the lines or to get the meaning an author implies but does not state directly (Duffy, 2003). It is considered a central on-going reading comprehension strategy as readers constantly elaborate ideas and create implied meaning for the text they read to fill in information for the overall meaning construction process. Readers normally connect their background knowledge with the text to

draw inferences throughout the whole process of reading (Dole, Duffy, Roehler, and Pearson (1991). As Duffy (2003) explained, this strategy dominates the overall process of meaning construction because it involves readers' attempts to "get inside the author's head" to figure out what ideas the author wants them to take from the text from both stated and implied information. During this operation, readers need to be aware that when they make attempts to interpret meanings using their prior knowledge, it may be different from that of the author. Thus, they need to develop ability to make logical guesses of what the author wants to convey. However, despite the notion of inferring being continual process, not all readers automatically apply this strategy. Therefore, to enhance reading comprehension, students need to be taught to improve their inferential skills. Practitioners agree that the teaching of drawing inferences should be introduced from the beginning of reading practice. Experts further caution that teachers also need to be aware that inferential activities may need to be introduced only when it is certain that students' understanding at the literal level of the text has been achieved (Dole, Duffy, Roehler, and Pearson (1991; Duffy, 2003). Earlier researchers had previously determined that instruction of this strategy improved students' abilities in making inferences and thus improved their overall reading comprehension (Raphael and Pearson, 1985; Raphael and Wonacott, 1985). In these studies, students were guided to become aware of how to answer referential questions such as whether they needed to use background knowledge alone or both background knowledge and clues from the text to draw inferences. The teachers also used prompts to help stimulate students to think about possible inferences. Duffy (2003) later emphasized that teachers need to make clear to students that drawing inferences is more than just guessing. Instead, they need to apply this strategic behaviour in a thoughtful and systematic fashion to derive logical implied meanings.

2.6.5 Summarizing Information

Irwin (1991) explained that summarizing information is one of the core strategies of top-down processing in reading. Comprehension occurs when a reader can identify main ideas and then connect them in an organized text to form a summary. Dole, Duffy, Roehler and Pearson (1991) determined that summarizing is a broader and more synthetic strategy than is identifying importance. Readers should be able to see the global structure of the text, identify what is important or not important, and then synthesize and reorganize those important ideas coherently to accurately represent the original text. Researchers note that writer-based summaries differ from reader-based summaries (Hidi and Anderson, 1986). The former helps readers improve their comprehension and recall; the latter is for conveying information to the audience. "A reader-based perspective changes summarization from a comprehension to a composition task". In producing this type of summary, students need to think about issues regarding the length and cohesion of text as well as the grammatical accuracy of the language. Therefore, it requires writing ability in addition to reading comprehension ability. Irwin (1991) also identified four strategic behaviours that readers generally employ to create a written (reader-based) summary. These include deleting unimportant information, substituting general terms for specific details, selecting topic statements and/ or inventing them when they are not provided in the text. She argued that teaching summarizing skills can be effectively performed in explicit instruction. However, she cautioned that some research regarding summarizing instruction revealed that the skill of inventing topic statements was found difficult for poor readers (e.g., disabled college students). Generally, with explicit instruction, students could improve summarizing skills of paragraphs when they could find stated main ideas. The instruction on inventing of topic statements did not appear effective when students did not have

adequate reading and writing abilities required for learning to achieve this skill. Thus, teachers need to be aware of this necessary element when teaching students to write a summary after reading a given passage. Also, she suggested that summarizing strategy should be introduced together with other related strategies such as text structure strategy.

However, top-down reading strategy has its limitation. In a study conducted by Stanovich (1980) and Eskey (1988) it was discovered that in many texts, the reader has little knowledge of the topics and cannot generate predictions and even if a skilled reader can generate predictions, it would take much longer than it would to recognize the words. Learners tend to emphasize higher level skills as the prediction of meaning by means of context clues or background knowledge at the expense of lower skills like the rapid and accurate identification of lexical and grammatical forms. This view was also supported by (Hirsh and Nation, 1992) that to comprehend an academic text, a reader needs to know 95% of the words. This implies that a text is comprehensive only when there is no more than one unknown words in every two lines in a text. Swaffar as cited in Skudiene (2002) argues that top-down models of reading can hardly be used at elementary levels of language instruction because "knowledge of a minimum of 5000 words is essential to make top-down processing possible". Again, because language pedagogy has got at the point that language and culture are interrelated, that is, it is not possible to teach language without culture. In order to recreate the writer's intended meaning, a set of reading comprehension strategies appears to be necessary. On the other hand, therefore, culture learning is necessary for the students to become familiar with the aspects that help them in better understanding the people and their way of life (Chastain, 1988). Hand in hand with the point above, Parry (1996) in a study on two separate groups of language learners, the Nigerian and Chinese, claims that the reading model which each group used depended on their language

background and culture. Parry also adds that ‘’Nigerian students showed a preference for top-down method of solving comprehension questions whereas, the Chinese group reported a strong tendency to use bottom-up’’. He concludes that cultural background is an important factor in the information of individual reading strategies…’’ Another researcher (Rajabi, 2009) conducted a research on the effect of rural and urban orientations on top-down and bottom-up reading models of the Iranian EFL learners and he found out that in addition to bottom up model, Iranian urban students made use of top down strategy whereas the rural subjects showed great reliance on texts and the application of bottom up processing that is, they heavily relied on the main content of the text, they never incorporated the knowledge of the world as well as their prior knowledge to answer reading comprehension questions.

The studies reviewed above suggest that top-down reading strategies is the type of reading strategies where meaning of the text starts from the higher level of knowledge using background or prior knowledge to the lower level that is, down to the text been properly read. Predicting, contextual guessing, generating questions, summarizing of useful information to mention but a few are some of the top-down reading comprehension passages. These strategies show that reading involves a deep thought over what a writer intends to pass across so, the reader must go beyond the literal level of meaning in order to derive meaning from any given passage. He has to read deeply between and beyond the lines to derive meaning but whether the principle of this strategy can help a junior secondary school student to derive meaning at the literal and interpretative levels of comprehension remains a misapprehension and it is an illusion to accept that readers at the JSS level would be able to predict contextually on any given text. This seems to reveal why this study is paramount as it may show the strategy that would bring about comprehension.

2.7 Areas of Similarities and Differences between Bottom-up and Top-down Reading Processing Strategies

A bottom-up model focuses on linguistic clues, builds literal comprehension of a text and a top-down model, emphasizes the importance of background knowledge, and builds global comprehension (Carrell, 1988; Swaffar, 1991). Abbot (2006) explains the difference between bottom-up and top-down strategies pointing out that; "bottom-up reading comprehension strategies are data-driven, detail-oriented strategies, whereas top-down strategies are conceptually driven, big-picture oriented strategies". Through the interactions of top-down and bottom-up processing, the flow of information through the system is considerably constrained in the sense that the objective of both strategies is to comprehend in order to derive meaning from the text. Even so, these processes are not, in themselves, enough to ensure apt comprehension.

In contrast, bottom-up models are not useful at the advanced levels because students are able to decode graphical input automatically. This explains why Weber (1984), says that bottom-up ensures that readers will be sensitive to information that is novel or does not fit their own ongoing hypotheses about the content or structure of the text while top-down processing helps the readers to resolve ambiguities or to select between alternative possible interpretations of the incoming data. Whereas bottom-up models rely on lower-level linguistic processing, 'top-down' models are based on cognitive higher-level processes where emphasis is put on the reader extracting and directing enough information from a text in order to confirm or reject various expectations or prior knowledge (Bartlett, 1932). Here, reading is a selective process, it involves partial use of available minimal language cues selected from perceptual input on the basis of the reader's expectation (Goodman, 1970).

Again, an example by Treiman (2012) may help to clarify the distinction between theories that stress bottom-up processing and those that stress top-down processing. Suppose that a reader has just read, “Daylight savings time ends tomorrow, and so people should remember to change their …” According to the top-down view, the reader guesses that the next word in the sentence will be “clocks.” The reader checks that the word begins with a “c” and, because the hypothesis has been supported, it does not take in the remaining letters of the word. Theories of reading that stress bottom-up processing claim that the reader processes all of the letters in the last word of the sentence, regardless of its predictability.

Eskey's (1986; 1988) in a second language version of an interactive model stresses the need for "holding in the bottom". As in any interactive model, Eskey posits a mixture of bottom-up decoding and information provided by top-down analysis. Nevertheless, he states that he is concerned that the promotion of higher-level strategies such as predicting from context and the activation of schemata may be too strong. Moreover, he warns that teachers “must not lose sight of the fact that language is a major problem in second language reading, and that even educated guessing at meaning is no substitute for accurate decoding”. To illustrate the importance of bottom-up processes in the interactive model, Eskey uses the following sentence pair: “Take three stiggles. Stick them in your ear”. He says that since nobody knows what a stiggle is, and that there is no context or extra-linguistic information to suggest that ‘’them’’ refers to stiggles, it must be the structure of the language a bottom-up aspect of the text that allows the reader to make the connection between pronoun and referent.

The statement that bottom-up processes play a central role in reading does not necessarily mean that top-down processes are completely unimportant. Studies have shown that words that are predictable from context are fixated for shorter periods of time and are skipped

more often than words that are less predictable, although the effects are relatively modest (Rayner and Pollatsek 1989). One interpretation of these results is that readers sometimes use their higher-order thinking skills to predict the upcoming words in a sentence. However, the results may alternatively reflect low-level associative processes within the lexicon (mental dictionary) itself.

For example, readers may spend less time on "cake" in the sentence "The guests ate the wedding cake" than in the sentence "The guests ate the large cake" because the activation of "wedding" automatically sends some activation to "cake." Whatever the mechanism responsible for context effects, we must keep in mind that most words are not predictable or only minimally predictable from context. After "the," for example, almost any adjective or noun could occur. Therefore, bottom-up processing is often essential for reading.

A lot of studies have viewed bottom-up and top-down reading strategies as models which incorporate the lower-level processes and teach students to construct meaning from the most basic units of language, including letters, letter clusters, and words and as models which include helping students generate meaning by employing background knowledge, expectations, assumptions, and questions, and engaging students in pre-reading strategies, such as previewing the text, predicting, and activating background knowledge respectively. Essentially, the bottom-up approach maintains that students make meaning of a text by building on a foundation of analyzing the smallest units of meaning. The top-down theories adopt a constructivist view, an idea which is based on the belief that learning occurs when learners are actively involved in a process of meaning and knowledge construction rather than passively receiving information. Constructivism shares both cognitivist and schema's views. That is, we do not passively "receive" meaning; we construct meaning while we read, and it is an ongoing process,

involving modifications and revisions. It relies on bottom-up and top-down processes. According to schema theory, there needs to be a union between the text and the reader's background knowledge in order for comprehension to occur. Specifically, "every input is mapped against some existing schema and all aspects of that schema must be compatible with the input information" (Carrell and Eisterhold, 1988).This process of matching incoming information to previously acquired knowledge structures also involves a set of both bottom-up and top-down processes. Top-down processing takes place as the reader makes inferences based on schemata and scans the input for information to match the partially satisfied, higher order schemata. Similarly bottom-up processing "is evoked by the incoming data; the features' of the data enter the system through the best fitting, bottom-level schemata.

Table 2.1 shows the difference between bottom-up and top-down reading processing strategies

Bottom- up Reading Strategy	**Top – down Reading Strategy**
A bottom-up model focuses on linguistic clues and builds literal comprehension of a text.	A top-down model emphasizes the importance of background knowledge and builds global comprehension.
Bottom-up reading comprehension strategies are data-driven and detail-oriented strategies	Top-down reading comprehension strategies conceptually driven and big-picture oriented strategies.
Bottom-up models are not useful at the advanced level like higher secondary and tertiary due to the fact that students are not able to decode graphical input automatically.	Top-down models are useful at the advanced levels because students are able to decode graphical input automatically.
Bottom-up models ensure that readers will be sensitive to information that does not fit their own ongoing hypotheses about the content or structure of the text.	Top-down models ensure helps the readers to resolve ambiguities or to let select between alternative possible interpretations of the incoming data.
Bottom-up models rely on lower linguistic processing.	Top-down models rely on cognitive higher-level processes
Bottom-up is text-based.	Top-down is knowledge-based.

The similarities and differences between these strategies is very obvious because from the opinions raised by the proponents of bottom-up and top-down reading strategies, there seems to be a theoretical disagreement not only in Nigeria but globally. It is because of the unresolved positions of the best reading strategies between bottom-up and top-down reading strategies that this study is embarked upon hoping that it would give an explanation of how learners make meaning from the text, building from the smallest unit of meaning to the highest, activating background knowledge, predicting etc. This study agrees to the fact that background knowledge is paramount in understanding a comprehension passage. The researcher has seen the need of choosing a passage that is not above the level of the students but the fact that the knowledge of bottom-up strategy would help a reader to critically answer a comprehension question remains an illusion.

Conceptual Framework

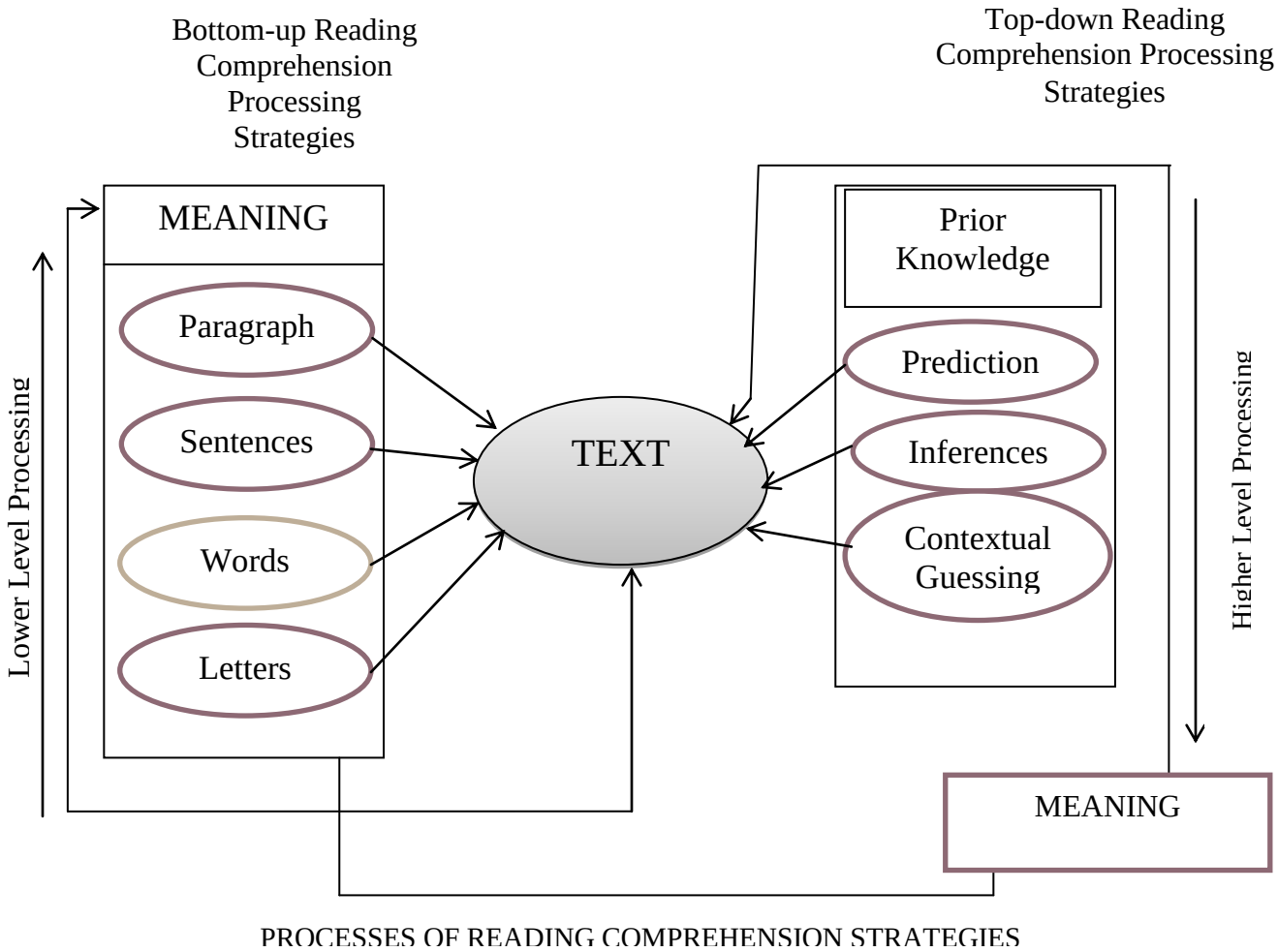


Figure 2.1: Diagram of the Conceptual Framework (DURU, 2015)

The diagram above represents the conceptual model for this study. The model has two major parts as can be seen above. The first part is known as bottom-up reading comprehension strategy. It is a strategy where students' comprehension of a text starts from the lower level stages until the meaning of the whole text is achieved. In this sense, instructors focus on how learners extract information from the printed page (Dechant, 1991; Olaofe and Masembe; 2006). The strategy comprises the following: letter which has to do with knowing and identification of the letters of alphabet for example, ability to identify letter A in a word like "congratulations" to words that is, knowing the meanings of words, sentence, where meaning would be derived from good constructed sentences to paragraphs where meaning would be gained at the paragraph level until the whole meaning of a text is achieved at the uppermost level as can be seen in the diagram 2.1 above.

The second part of the theoretical framework is the top-down reading comprehension strategy. This is a model of teaching reading comprehension where understanding of the text starts from the higher level stages down to the text being read. In this model, "content schemata" are to be activated; while prior knowledge which plays a major role in learner's comprehension as can be seen in the diagram 2.1 above in used. In this sense, top-down strategy contains predicting, inferring, contextual guessing and focusing on the context and managing to construct meanings in the text. The whole stages in top-down reading comprehension strategies centers on the students' background knowledge because without it a student cannot predict, skim, infer etc. while reading. (Harris, 2005; Rajabi, 2009; Smith, 1985).

Between the bottom-up and top-down reading comprehension strategies lies the text. The text is where meaning is achieved whether a student uses bottom-up or top-down reading comprehension strategies in tackling comprehension questions. The students who use either

bottom-up or top-down reading comprehension strategies have a common goal which is "deriving meaning from any given text".

2.8 Cognitive Academic Language Learning Approach - CALLA

An approach to teaching learning strategies that was developed specifically for English language learners is the Cognitive Academic Language Learning Approach (CALLA) (Chamot & Malley, 1994). CALLA is a method of combining cognitive theory with lesson planning and learning strategies to develop content and build the academic fluency of English Language Learning (ELL) Students and is now implemented to help those students who have gained academic fluency or those who may have academic fluency but are struggling in applying their skills. CALLA helps students to use their prior content knowledge as a tool in acquiring new knowledge, and has been successful in improving student learning English language, as well as in other academic subjects. Hudson (2007) regarded learning strategies as a series of actions that a reader utilizes in order to construct meaning in the reading process. Hence, the analysis of using reading strategies indicates how readers conceive a task, what they do to gather meaning from texts, and what they do when comprehension breaks down (Block, 1986, 1992; Zhang, 2001; Macaro, 2001; Macaro and Erler, 2008). Furthermore, Mokhtari and Reichard (2002) believe that increasing students' awareness of their comprehension processes while reading is an important first step towards their becoming constructively responsive, strategic and thoughtful readers. On the other hand, when students are asked to read a text for comprehension, some cannot focus their attention on the text during reading and, unfortunately, many are not aware of how to read in order to meet the academic expectations.

Chamot and O.Malley (1994) identified 5 phases of CALLA instruction and they are: preparation, presentation, practice, self-evaluation and expansion.

2.8.1 Preparation

The teacher prepares his students for a lesson on reading comprehension by activating their background knowledge on the concept he will present. In the preparation phase of a lesson that includes learning strategies like top-down reading comprehension strategy, the language teacher activates the learners' background knowledge of the strategies they are already used to help them complete a specific task. For example, if you are introducing the strategy "summarize" in a reading comprehension activity which is one of the top-down reading strategies, a useful strategy to check comprehension you might want to ask students what they do to make sure they understand what is happening when they read a story. Students can share their strategies with a partner or small group, then with the whole class as you make a list of all the strategies students identified. You can also share your own strategies for the task. Whereas as if you are using bottom-up reading strategy, the students can be asked to think and remind their teacher of the new words they have learnt previously. Then, they should also associate between new information with their prior knowledge. They could also make the students prepared by giving them words that are related to the ones they have learnt previously to help them modify their prior knowledge.

2.8.2 Presentation

In the presentation phase of a reading comprehension lesson, one top-down reading processing strategies "inferences" was presented by getting the students to arrive at applying background knowledge in understanding text expression while the teacher served as a guide. The strategy was taught by explicitly telling the students the name of the strategy (inferences) in order to encourage the students to use the name when referring to it. This is especially important because knowing the name "inferences" enables students to carry on discussions

about strategies used and to differentiate between strategies. Again, if designates with a gesture or illustration, students will have more opportunities to understand and remember “inferences” without difficulty.

Again, the teacher goes ahead explaining to the learners that “inference” is one of the top-down reading strategies. For example, this strategy is called “make inferences”. Make inferences can help us figure out the meaning of a story by using clues such as the content, pictures or specific words in the story. The teacher also encourages the students to try and read other sentences to figure out the meaning of words.

Hand in hand with inferences is making it clear to the students when teaching them using top-down reading strategy that situations call for the strategy’s use. For example, he can explain to the students that “make inferences” is an appropriate strategy to use when they do not understand every word they hear or read; they can use what they do understand to help them figure out the rest. If the teacher has emphasized in his explanations one skill, like reading, he should make sure to emphasize that the strategy can be used with other skills as well, such as listening or writing.

Another important step in the presentation phase is modeling the strategy. If students are learning to make inferences when reading a story, then the teacher can model the strategy on a part of the story. When teaching reading comprehension using one of the bottom-up reading strategies “word recognition”, you can stop where a point is unclear and think aloud while trying to figure out the meanings of words or phrases from the context. This technique serves the dual purposes of modeling the strategy and making learning strategies instruction explicit. You can ask some students to tell the class the meanings of those words while reading.

Finally, the last step has to do with explanation of the importance of the strategy. The teacher points out to students how they could benefit from using the strategy. For example, the teacher says, “As I listen to this story, there are parts that I do not understand. I can understand better by making inferences.” That is, “making inferences” enables learners to understand comprehension passages better.

2.8.3 Practice

Once you have explicitly taught reading comprehension passage via bottom-up or top-down reading processing strategies, students should have the opportunity to answer comprehension passages using the strategies. The content and reading strategies you taught serve as the materials students would use to practice the strategy. For example, during a lesson, students may read a text about the life cycle of frogs. In the practice phase, they use the strategy “make inferences” while studying the text to complete their assignment. When creating or selecting material for the practice phase of a lesson using bottom-up or top-down reading strategies instruction, the teacher must think carefully about his students' abilities. The level of the tasks and material should be slightly above what the students can do independently. If the class contains students at varied levels of ability, then the teacher might design different types of tasks for the practice phase to accommodate these differing ability levels. Success with bottom-up or top-down reading comprehension strategies depends upon whether students find them useful. If the chosen practice material is below their level, they might not see the need for the reading comprehension strategies, they can succeed without it. If the material is above their level, then even with the reading strategies the students might not succeed at the task and might perceive the strategy as unhelpful so it has to be balanced for the level of the students.

Again, Chamot (2005) identified additional components of the practice phase which include coaching and teacher feedback. After introducing students to new strategies, provide them with additional opportunities to practice those they already know. While introducing new strategies, teachers should also coach students with reminders to use previously learned ones. He should continue to provide practice opportunities and encourage students to use strategies over time; nonetheless, he may gradually eliminate specific reminders, since the expectation is for students to develop independence in either bottom-up or top-down reading strategies use. In the early stages, students also need feedback about how well they are applying a strategy. Feedback should be specific. It should restate the strategies the student used and how they were used. You might say: I liked the way you used "make inferences" to figure out the meaning of that word.

2.8.4 Evaluation

The evaluation phase of the CALLA instructional framework focuses on students' self-evaluation of the effectiveness of the strategies (bottom-up or top-down) they use in accomplishing specific tasks. Students need to find out which of these reading strategies work best for them on certain tasks and why. Through such self-evaluation, students consciously monitor those strategies they find effective and ineffective, and by so doing refine their individual repertoire of strategies. Below is a variety of methods that an English language teacher could use to encourage student self-evaluation of learning strategies when teaching them using bottom-up or top-down reading strategies:

(a) Class Discussions

Teacher-led class discussions of either bottom-up or top-down reading strategies effectiveness should come immediately after students have practiced any of the strategies. They

may include inviting students to comment on how they used an assigned strategy, whether they used additional strategies, and which strategy or combination of strategies worked best for them. For example, when teaching them reading comprehension on their English textbook on page 66 titled “bribery and corruption” using bottom-up strategies, the teacher could use a synonym or descriptive phrase for unknown words or expressions. For example, question like:

The word ‘canvass’ as used in the second paragraph means

A confuse B persuade C dissuade D reveal

Whereas when teaching them reading comprehension using one of the top-down reading strategies, for example, “inferences” in teaching the same passage written above, the learners would be asked to use context and what they know to figure out meaning and they would also read and listen between the lines and that would help them to go beyond the text to understand its meaning.

(b) Learning Strategies Checklists

Checklists consist of a series of statements such as: “I made predictions before listening to the news report. I thought about what I already knew about mountain ranges. I used “Use Selective Attention” to focus on key vocabulary words, etc. Students indicate on the checklist whether they used the strategy (Chamot & Malley, 1994). A sample checklist for JS II students’ self-assessment may be as follows: learning strategies task, I used these strategies, yes/no, organize/plan, make inferences, make predictions, use imagery, use real objects/role play, summarize, use selective attention, access information sources and cooperate. As the teacher and his students become more familiar with strategies, he can monitor and evaluate students’ strategies use on a regular basis, not just when he is explicitly teaching reading comprehension using bottom-up or top-down reading strategies. Eventually, he may observe

students using them to answer comprehension questions in their daily activities and elicit their comments about the strategies' effectiveness. Teachers who are serious about bottom-up or top-down reading comprehension strategies instruction are continually looking for strategies initiated by their students. When a student is observed using a new reading strategy or a familiar strategy in a new context, teachers can direct other students to think about and evaluate its usefulness for performing the task at hand. This spontaneous evaluation illustrates to students that bottom-up or top-down reading comprehension strategies are natural and useful part of language learning.

2.8.5 Expansion

Again, Chamot (2005) explained that in expansion, students learn to relate and transfer bottom-up or top-down reading comprehension strategies to other tasks, subject areas and aspects of their lives. A teacher may initiate a brainstorming session by sharing with his class different ways he has used a particular learning strategy. The class can continue brainstorming additional contexts in which it could be useful. He may then point out how to transfer a strategy from one context to another. If students have used "use imagery" to help them remember the main events of a story they have listened to, he might help them expand their use of this strategy to reading a story. If they have used "make predictions" before reading a story, he might model how to "make predictions" before watching a movie. Finally, he can assign students to use either bottom-up or top-down reading strategies in a new context for homework. The next day, students can report how they used the strategies and how well they worked.

Teachers should brainstorm with students ways they can apply strategies to tasks like learning to use strategies to help them learn a new skill or game. Such modeling will help students transfer and apply strategies to all aspects of their lives. Again, learning comprehension

passages using either bottom-up or top-down reading strategies are recursive. Once you prepare your students for learning a new strategy, present it to them, give them the opportunity to practice it, help them evaluate it, and provide options for expanding the strategy to other areas of study or their personal lives, the strategy should be recycled in later lessons. It should be re-taught and practiced until students have an intuitive sense for when, how, and why to use it. In addition to explicitly teaching learning strategies through an instructional sequence such as that offered above, it is important to recognize and seek out occasions when learning strategies instruction can be reviewed and reinforced. This more informal approach emphasizes to students the natural link between strategies, language, and content learning. For example, when you observe a student tackling a comprehension problem in an original way, ask him about the strategies he is using and share these with the rest of the class. Students learn to use strategies independently by talking about their learning. Immerse students in bottom-up or top-down reading comprehension strategies. Seek out opportunities at all times for mini-reading comprehension strategies lessons and for sharing individual students' strategy use with others. In this manner your immersion instruction will include not only content and language learning, but also strategies learning.

The studies reviewed above suggest that Cognitive Academic Language Learning Approach (CALLA) as a learning strategy has five phases: preparation, presentation, practice, evaluation and expansion and has been found to be effective because it helps students to acquire new knowledge and it would be very helpful in this work because it determines students' understanding of a written text especially when teaching comprehension passages using either bottom-up or top-down reading processing.

PHASES OF COGNITIVE ACADEMIC LANGUAGE LEARNING APPROACH

Table 2.2 Academic application of CALLA to bottom-up and top-down reading strategies

Cognitive Academic Language Learning Approach	Application to Bottom-up Reading Strategies	Application to Top-down Reading Strategies
Preparation Phase	Asking the students questions based on their previous knowledge e.g. what is the meaning of immunization from the last passage you read?	Ask them to predict other words the writer could use in place of "immunization" in the passage.
Presentation Phase	Name the strategy. Write out some new words and ask them to write their meanings. Also model the strategy by pausing while reading and also try to figure out some meanings of words or phrases based on the context.	Name the strategy "inference". Make inferences or say something about the topic. While reading, students should use what they understand to figure out the ones they do not understand.
Practice Phase	Use the strategy taught to answer or complete a task like; mention two groups identified by the writer as agents of bribery and corruption.	Apply the strategy you have learnt to complete a task, as in, why is corruption "a menace" in our national life?
Evaluation Phase	Students should carry out a self-evaluation on how they answered the comprehension questions using either class discussion or learning strategies checklist.	Students should carry out a self-evaluation on how they answered the comprehension questions using either class discussion or learning strategies checklist.
Expansion Phase	Ask the students to write out the strategies that helped them answered the comprehension questions and encourage them to expand it to other subjects by transferring bottom-up knowledge to tasks or subjects areas by using synonyms or antonyms to summarize a given text.	Ask the students to write out the strategies that helped them answered the comprehension questions and encourage them to expand it to other subjects. Transfer top-down knowledge to other task or subjects like drawing a conclusion on a subject matter on subject like Government

2.9 Previous studies on bottom-up and top-down reading strategies

Oyetunji (2011)) studied the effect of reading strategy instruction on L2 teacher trainees' performance being a Master of Arts work submitted at the University of South Africa. The study employed quasi-experimental investigation. The instruments used for collection of data were a strategy questionnaire and a reading comprehension test. The study answered three research questions focusing on the effect of strategy training on students' strategy use, reading comprehension and L2 academic performance. The study reported that data collection, data reduction and data analysis were described. The results of this study indicated that strategy training has an effect on students' strategy use and reading comprehension. The control and intervention groups' participants, who were homogeneous in terms of comprehension levels before the intervention, showed a significant difference after the intervention, a difference that can only be attributable to the given intervention. Also, the results showed an inconsistency between the participants' positive claims about their use of strategies in reading and a demonstration of such claims in practical terms. In reality their low reading performance suggests that they are simply not strategic readers. There is an important methodological lesson to be learned from this, namely the importance of data triangulation. In this case, it helped to test the consistency of data from two different instruments meant to complement each other. Thus, data triangulation increases the chances of giving a more objective description of the participants' responses compared to a study which relies on questionnaire alone.

Lastly, the results revealed that a short-term reading strategy intervention does not have a spill-over effect on L2 students' academic performance. This suggests that more time is required for explicit teaching and practice of reading strategies for the training to have an enduring effect on students' performance in L2.

The present study and the one reviewed above are both researches in partial fulfillment of Masters, though, in different countries. The two are experimental researches that were conducted in two phases, that is, a pilot and a main study. Both studies used the same research design and similar reading strategies for treatment. However, the two studies differ in the following areas: sample size and the number of instruments. Oyetunji used only 32 students that were in their second year of a 3 year course leading to the award of a diploma Certificate in Primary Education. While this present study used 120 JSS two students in Zaria Educational Zone of Kaduna State of Nigeria. Most of the participants used in Oyetunji's work were females. The study used only one male student and he did not participate in the posttest, whereas, the present study used both genders.

Another study was carried out by Hirotaka (2002) titled "using top-down skills to increase reading comprehension in Japan. The researcher used Japanese senior high secondary school and his work is on the importance of top-down skills. He backed his findings with the work of Nuttall (1996) who insists that one of the main purposes of our teaching reading is to develop students' bottom-up skills but "nevertheless, it is probably right to devote more class time to bottom-up work". The reasons can be easily imagined: mastery of the bottom-up skills is the most difficult for students; and the successful interpretation of text cannot be realized without accurate understanding of the text. No teachers of foreign languages oppose these reasons.

Everyone will notice one thing, however, looking back at Nuttall's utterance again. She wrote "more class time", which implies that some time should be spent in cultivating students' top-down skills. Probably, our traditional way of teaching reading cannot be changed drastically due to the nature of learning a foreign language. Therefore, it is important not to try

to change the class dramatically, but to try to make "small" changes continuously, the researcher then insisted that top-down skills, and pre- and post-reading activities should be more emphasized.

Obviously, this study differs from the present study in its topic; it looked at using top-down skills to increase reading comprehension whereas the present study is on the effect of bottom-up and top-down reading strategies on students' reading comprehension achievement of junior secondary school II students. Nonetheless, the two studies were similar that both were at masters' level looking at effects of reading strategies of their subjects.

Other researchers like Rao (2003) in his work argues that "the more world-knowledge that a reader brings to the text, the less dependent he or she is upon purely linguistic information such as grammatical, syntactic and semantic clues, thus making his or her reading process more efficient". He believes that top-down processing strategies could greatly improve English education in China, where teaching practices have traditionally focused on formal grammar instruction and other bottom-up decoding strategies. Rao (2003) also argues that "the process of reading comprehension is guided by the principle that every input is mapped against some existing schema and that all aspects of that schema must be compatible with the input information". In other words, top-down processing is dependent upon fitting new information into learners' previous knowledge (schemata).

Another study by Abbott (2006) shows that there is some evidence that top-down processing is favoured by Arabic learners. He discovered through surveys of intermediate learners that Mandarin speakers preferred bottom-up strategies such as scanning, paraphrasing and matching. However, intermediate Arabic speakers preferred top-down strategies, such as skimming, connecting and inferring and it could be the reason that there are such stark

differences in the strategies used by students from these cultural backgrounds is connected to the way they are taught language in their home countries. According to Abbott, "Chinese teachers tend to use traditional teacher-centered approaches to teaching English as a foreign language" whereas, "in contrast; the general trend in Arab nations is to place more emphasis on student-centered EFL activities that encourage linguistic interaction through the use of authentic, real-life tasks". Again, research continued to explore the relationship between readers' use of knowledge of text structures and their success in reading. Students who use this knowledge as a strategy to guide their reading in comprehension texts can identify main ideas from the passage, comprehend, and recall more messages than those who do not use the strategy. Generally, students use this strategy to help interpret meanings at all levels of reading. Sometimes, they connect structures of ideas within the smaller parts of the text (e.g., between words, clauses, sentences within a paragraph). Some try to connect ideas to identify the structure of a larger cohesive picture (Anderson, 1999; Meyer and Rice, 1984; Kletzien, 1992; Richards, McGee, Lomax, and Sheard, 1987).

In another study by Kletzien (1992), this focused on the interaction of text type and learner proficiency levels. The study compared three text types' causation, comparison, and collection and found that a causation passage activated greater use of the knowledge of text structure among highly proficient high school student readers than the other passage types. He further predicted a positive trend that less proficient students would apply strategies to a greater extent in this passage type. Both groups of students tended to use knowledge of text structure less in the collection passage. He also noted that knowledge of text structures seemed to play a very significant role when the content of a passage was not familiar to the students. However, when the passage was difficult, the students' ability to identify structure from overall text

reading diminished; they focused instead on smaller units of text (i. e., words and phrases). Therefore, it is important that students learn about text structures. To aid that, Richgels, McGee, and Slaton (1989) proposed an instructional activity that focuses on using the knowledge of text structures as a strategy to combine reading and writing together. They argued that this serves to establish comprehension and guide well-organized essay writing, an argument which is still held by the field.

From the review of the previous studies, there is clear evidence that the studies together with this present study have a common goal on how students would better comprehend a text. However, some of them differ with the present one in the following ways: degree level, sample size and the type of instruments. Nonetheless, it seems that there is a disagreement on the parts of scholars on whether bottom-up or top-down enhances students' comprehension, this suggest that the present study will contribute hugely on the effect of bottom-up and top-down reading strategies on students' comprehension of a text.

2.10 Gains from Review of Related Literature

The review of related literature in this study adequately covers the variables in the research topic. These include bottom-up and top-down reading processing strategies. This present researcher reviewed many literatures in the quest in reviewing related literature but there are still some that were not reviewed. The importance of the literature reviewed cannot be over emphasized because it enriched this work.

Again, it helped the teachers that assisted the researcher in the treatment procedures to follow the following strategies using bottom-up: arrangement of letters to form meaningful words, sentences and then paragraphs where the subjects where extensively taught on how to bring out the topic sentence and supporting sentences from different position. The same is

applicable to the top-down reading processing strategy because subjects were properly guided to infer and critically draw meaning from the text and even outside it, make prediction from titles using their prior knowledge.

In a nutshell, the review of related literature guided the present study to select reading passages that were not above the abilities of the subjects or too simple for them. It also enriched this work by giving it a solid foundation.

Table 2.3 showing the Gains from the Literature Reviewed

Table 2.3 Gains from the Literature Reviewed

Authors Reviewed	**Summary of Aspects Reviewed**	**Areas Relevant to the Present Study**
Brown, (2007); Gough, (1985)	Argue that bottom-up has signals like letters, morphemes, syllables, words, phrases, grammatical cues or discourse markers	The study looked at meaning at the phrasal level
Dechant, (1991); Olaofe and Masembe, (2006)	See bottom-up strategy as principle that written text is hierarchically organized that is from phonemic to sentence levels.	The study looked at the strategy from phonemic awareness to sentence levels.
Nounoul (2013), Chall 1967 cited in Osborne, 2012)	Proposed bottom-up strategy as language element such as grammar, vocabulary and cohesion.	The study looked at meaning of new words.
Harris (2005)	Proposed that bottom-up reading follows one single direction until the readers understand the message the author intends to convey. Reading was seen as a process that follows one single direction, that is, from the text to the reader, and that effective reading is the ability to understand adequate progression of language from the page to permit readers to understand the message the author intends to convey	The study tested the students to know their understanding of the passages that would be given to them.
Harris, (2005); Rajabi, (2009); Smith, (1985).	They argue that top-down model includes skimming, scanning, activating background knowledge, predicting, thinking of the author's main idea, finding clues, contextual guessing and associating image by students which have specified this model of processing as conceptually driven.	The study adopted skimming, scanning, prior knowledge, prediction to mention but a few as top-down strategies.
Olaofe and Masembe (2006).	Argue top-down reading strategy as the name implies operates on the principle that comprehension of written text starts from the higher level stages of understanding down to the text being read.	The study looked at top-down reading strategies that the comprehension of a written text starts from a higher level stage of understanding.

2.11 Summary

There is no doubt that reading strategy is the mental process chosen by the reader consciously in order to achieve certain reading tasks. Cohen (1986) sees it as a set of methods and techniques used by readers, so that they can achieve success in reading especially in the junior secondary school. Unfortunately, many JSS students, most especially in public schools cannot read with understanding.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter discusses the design and procedure followed in the study. The study examined the effect of bottom-up and top-down reading comprehension strategies of JSS II students in Zaria Educational Zone. It was organized in the following ways: research design, population size, sampling and sampling procedures, instrument for data collection, and validity of research instruments, procedures for data collection, method and procedure for data analysis, pilot study and summary.

3.2 Research Design

The research design adapted for this study is pretest-posttest experimental design (Gribbons and Herman, 1997). The pretest-posttest design was carried out by forming a treatment and control groups (the experimental group 1, experimental group 2 and the control group). Below is the diagrammatic representation of the research design.

1st	EG1	→	O_1	→	XBUPS	→ O_2
2nd	EG2	→	O_3	→	XTDPS	→ O_4
3rd	CG	→	O_5	→	X_O	→ O_6

Key:
EG1 = Experimental Group One
EG2 = Experimental Group Two

CG = Control Group

XBUPS = (Bottom-up Processing Strategy)

XTDPS = (Top-down Processing Strategy)

Xo = (Conventional Strategy)

O1, O3 & O5 = Pre-test

O2, O4 & O6 = Post-test

Research Design Illustration

3.3 Population for the Study

The population of the study comprises all the junior secondary year two (JS2) students of the public secondary schools of Zaria Inspectorate Division of the Ministry of Education, Kaduna State. This is made up of thirty (30) junior secondary schools with a total number of six thousand, eight hundred and eighty three (6,883).The study area comprises two Local Government Areas (LGA) and has the characteristics elements that are of interest to the researcher such as student population; co-education and geographical spread (see Table 3.1) below.

Table 3.1: Population of the Study

S/No	School	Location	Sex		Total
			Male	Female	
1	GJSS Aminu	S/ Gari	130	96	126
2	GSS T/ Jukun	T/ Jukun	98	212	310
3	GSS K/ Jatau	Zaria City	163	137	300
4	GJSS Zaria	Zaria City	0	220	220
5	GJSS Bogari	Zaria City	40	410	450
6	GJSS Yakasai	Zaria City	64	35	99
7	GSS K/ Kuyambana	Zaria City	220	90	310
8	GJSS T/ Saibu	T/ Saibu	58	35	93
9	GJSS K/ Doka	Zaria City	372	228	600
10	GJSS Aba	Zaria	29	02	31
11	GJSS Muchia	S/ Gari	150	100	250
12	GJSS Matari	Zaria	25	03	28
13	GSS Dinya	Dinya	35	12	47
14	GJSS Chikaji	S/ Gari	125	95	220
15	GJSS Gimba	Zaria	44	16	60
16	GSS Dakac	Dakac	136	54	300
17	GGJSS Pada	Zaria City	0	300	300
18	GGJSS D/ Bauchi	S/ Gari	0	514	514
19	GJSS Awai	Awai	50	10	60
20	GJSS Gyallesu	Gyallesu	108	42	150
21	GJSS Sai K/ Karua	Zaria City	174	156	330
22	GJSS Kinkiba	Kinkiba	40	08	48
23	GSS Chindit Junior	S/Gari	0	340	340
24	Barewa College	Zaria	295	0	295
25	GJSS K/ Gayan	Zaria City	0	270	270
26	GGSS Chindit Boys Junior	S/ Gari	370	0	370
27	GJSS Magajiya	Zaria	112	39	151
28	GGSS (WTC)	Zaria	0	150	150
29	GSS Ahhudahuda	Zaria City	200	0	200

30	GJSS Likoro	Likoro	100	0	100
	Total		**3309**	**3574**	**6883**

Source: Zaria Inspectorate Division, 2014

According to the published table for determining sampling size by Yount (2006), a study with a target population of 5,001- 10,000 has an ideal sample size of 3% of the total population. This study sampled 120 students out of the total population of 6,883 junior secondary (JS) year two students in the study area since it is not possible to teach reading comprehension in all the 30 junior secondary schools in Zaria Educational Zone. Table 3.2 shows the table of determining sample size developed by Yount (2006).

Table 3.2: Table of determining sample size developed by Yount (2006).

Size of Population	Sample Size
0-100	100%
101-1,000	10%
1,001-5,000	5%
5,001-10,000	3%
10,0000+	1%

Three schools from two Local Government Areas out of the Local Government Areas that constitute the study were purposively selected and they are: Government Secondary School Aminu, Government Secondary School Tudun Jukun and Government Secondary School Gyallesu. They are well separated apart to avoid interaction effect of subjects. Sample of schools was drawn using the purposive sampling technique while the sampling of students was drawn by the use of the random sampling procedure table of numbers (Best and Kahn, 1995). This idea was in the effort to avoid a sampling error or a sampling bias.

Table 3.2: Sample size selected for the study

S/No	School	Status	M	F	Sample
1	Govt. JSS Aminu	Experimental	80	40	40
2	Govt. JSS Tudun-Jukun	Experimental	48	72	40
3	Govt JSS Gyallesu	Control	80	40	40
	Total		**208**	**152**	**120**

3.5 Research Instrument

Research instrument for this study was Reading Comprehension Achievement Test (RCAT). The researcher, with the help of her research assistant selected the comprehension passages with comprehension questions that display the same difficulty level from students' English textbooks titled "New Concept English 2 for Junior Secondary Schools (2012) and Intensive English 2 for Junior Secondary Schools". The test covered both bottom-up tasks such as decoding and vocabulary development of words. This is because bottom-up reading processing model mainly stresses on literal comprehension which has specified the model as "data driven'' It also covered top-down tasks like predicting the next idea in the passage, understanding the main ideas using prior knowledge and guessing of unfamiliar words or phrases. This is because top-down reading comprehension model operates on the principle that comprehension of text starts from the higher level stages of understanding down to the text being read. The passage was selected based on the following criteria:

(1) it is interesting to learners;
(2) subject matter was suitable for male and female students;
(3) content of the passages was educative and informative and
(4) it is also suitable to age, linguistic, readability and socio-cultural disposition of students.

Based on the criteria written above, these passages were selected:

- Bribery and corruption
- The civil service
- The old woman and the doctor

The researcher treated the subjects with the passages mentioned above but the passage (bribery and corruption) was mainly used for the test.

The marking scheme for the Reading Comprehension Achievement Test (RCAT) tested the four levels of reading comprehension which are **literal**, which means what is actually stated, **interpretative or analytical** which built on the facts in the text and implied meaning, **inferential** which judged the text based on opinion, comparison and cause and effect and, finally **critical** which is actually based on the author's language, values, imagery, style and purpose.

Table 3.3 below presents the marking scheme used in assessing reading comprehension processing areas of the subjects.

Table 3: Marking Scheme for Reading Comprehension Achievement Test

Comprehension Stages	**Question types**	**Marks Obtainable (100%)**
Literal meaning response	Asking the readers to locate and recognize key words and recall the order of events.	25
Interpretative meaning response	Asking the readers to connect the story to their own experiences. Bringing out facts and opinions.	25
Inferential meaning response	Asking the readers to draw on other knowledge to make sense of the story. Bringing out the main ideas.	25
Critical meaning response	Asking the readers to offer their own opinions.	25
Total		**100.00**

3.6 Pilot Study

A pilot test was conducted in Destiny Secondary School Sabon-Gari Zaria, in order to test the reliability of the research instruments. Ten students were grouped into two equal groups and a pre-test (Reading Comprehension Achievement Test) was administered to both groups. The groups were then trained on bottom-up and top-down reading comprehension strategies respectively for one week using Cognitive Academic Language Learning Approach (CALLA) and therefore a post-test (Reading Comprehension Achievement Test) was administered on the final day of the treatment and the questions covered the four levels of reading comprehension: literal, interpretative, inferential and critical. The results of the pre-test and post-test for both groups were then subjected to a test retest method of reliability to check for internal consistency.

3.7 Validity of the Research Instrument

The research instrument for the study was validated by teachers of English from the Teaching English as a Second Language (TESL) Section of the Department of Arts and Social Science, Faculty of Education, Ahmadu Bello University, Zaria.

3.8 Reliability of the Research Instrument

The research instrument namely; Reading Comprehension Achievement Test (RCAT) was pilot tested at Destiny Secondary School Sabon-Gari, Zaria. The results were subjected to the test-retest method of reliability determinants. These were found to be $r = 0.71$ and $r = 0.83$ for bottom-up and top-down respectively while the Pearson Product Moment Correlation (PPMC) was observed. Hence, the research instrument is reliable.

3.9 Procedure for Data Collection

The procedures for collection of data are stated below:

3.9.1 Step One: Pre-test

The three (3) groups of students were pre-tested to ensure sameness in their ability level and to find out if they are compatible and comparable. Scores obtained by students were collected and properly kept in a file.

3.9.2 Step Two: Treatment

After the pre-test, students were divided into experimental and control groups using random sampling technique as can be seen below.

- forty (40) sampled students from Tudun-Jukun Government Secondary School was tagged bottom-up experimental group;
- The forty (40) sampled students from Aminu Government Secondary School was tagged top-down experimental group;
- while the forty (40) students of Gyallesu Government Secondary School was tagged the control group.

After the administration of the pre-test, teachers for the two experimental groups were intensively oriented on the techniques of teaching bottom-up and top-down as stipulated by the proponents of each in the review of literature. The bottom-up group was trained on the bottom-up reading comprehension strategies; top-down group was trained on the top-down reading comprehension strategies whereas the control group received similar treatment in the traditional technique. Eight weeks were used for teaching students reading comprehension as can be seen below.

3.9.3 Step Three: Procedures on how the subjects were treated

The treatment comprised reading comprehension passages of different length and difficulty levels. The treatment lasted for eight (8) weeks for both bottom-up and top-down

groups after the administration of pre-test to the subjects. The experimental groups were taught reading comprehension using bottom-up and top-down reading strategies respectively using 45 minutes per lesson as stated below:

3.9.4 Experimental group 1 (Bottom-up group)

The bottom-up group was trained on the bottom-up reading comprehension strategies stated by James in ESL 009 Final Papers (2012) and Gray and Rogers, cited in Kucer (1987) which says that in bottom-up approach L2 learners focus on the basic blocks such as letters, sentences, paragraphs and the text as a whole. In this approach reading is a linear process in which readers decode a text, word by word, linking the words into phrases and then sentences respectively as can be seen below:

(i) **Word-by-word decoding strategies:** The students read a passage individually. This helped the teacher to know their ability of decoding words on pages which is an essential part of reading.

(ii) **Decoding and Vocabulary development:** While reading, the teacher guided the students to see unfamiliar words and learn the meaning of the entirely new words by learning the meaning of their parts especially the basic part which is called "the root" as can be seen in the examples below where the roots are marked out in italics.

*dia*gnosis	=	the identification of the nature and cause of an illness.
*radio*theraphy	=	curative or therapeutic use of ionizing radiation, almost exclusively used for the treatment of malignant (harmful) disease.
*radio*graphy	=	writing, record that is, the process of making radiographs and the science of analyzing them.

In a passage "Advances in Modern Medicine" on page 3 of *Intensive English for Junior Secondary Schools Book 2*, students were asked to use their dictionaries and find the

meanings of words like “immunization”, “anesthesia”, “alleviate”, “remedy”, “patients” to mention but a few dealing with the treatment of diseases. When this was done, the experiment went a long way in helping them to know the actual meanings of the words in a written text and when their vocabularies were built. Again, after reading the passage titled “Thermometer” on page 18 of New *Concept English for Junior Secondary Schools Book 2*, students were asked questions on vocabulary of health and the body using cloze test, they were asked to fill the gaps from the options that were given to them.

(iii)**Identifying phrases and sentence types:** Having taught the students “decoding and vocabulary development” they were asked to replace the underlined words in the passages stated above. For example; “immunization”, “anesthesia”, “alleviate”, “remedy” and “patients” that would be given them with other words or phrases and also identified sentences according to their types like the simple, compound and complex sentences.

(iv) **Bringing out the topic sentences that are in the beginning, middle and end of the paragraphs:** Before the students would be asked to bring out the topic sentences in the passages they had read, the teacher would carefully teach them that “a passage is made up of key sentences, each paragraph in every passage has a topic sentence which summarizes the main idea of that paragraph. It is usually, but not always, the first sentence in a paragraph. It could also appear in the middle or end of a paragraph and another name for it is *focus sentence”.* Now, having known what a topic sentence is, students were asked to write the topic sentence of every paragraph from the passages they have read. The groups were post-tested at the end of the exercise.

(v) **Answering of comprehension questions:** In this stage, the students answered the comprehension questions such as the ones written below.

1. What is the purpose of the writer?
   (a) To caution against the dangers of new drugs.
   (b) To inform about the advances of modern science.
   (c) To raise alarm about loss of lives.
   (d) To advertise new products and drugs.
2. According to the writer:
   (a) much work remains to be done.
   (b) too much work has already been done.
   (c) too much harm has already been done.
   (d) there will be no more disease and pain.

The subjects were trained on the strategies using Cognitive Academic Language Learning Approach – CALLA (Chamot and O'Malley, 2005). The procedure includes: Preparation, Presentation, Practices, Self-evaluation and Expansion. Written below is an illustration of how CALLA was used to teach the strategies.

1. **Preparation:** The subjects were motivated, identify their objectives, develop vocabulary and the researcher elicited their prior knowledge. For example: Since the students have read the passage on page 3 of "Intensive English for Junior Secondary Schools Book 2" titled "Advances in Modern Medicine" they were motivated by asking them questions that developed their vocabulary based on that passage in order to arouse their interest as can be seen below:

Change the order of the letters below to find five (5) words from the passage and make sentences with them.

(a) ZAINMIMUOTI (b) NEHCLAGLSE (c) ASIEDES

(d) ITAPTEN (e) EIKYND

2. **Presentation:** At least one bottom-up reading comprehension strategies ‘‘Identification of topic sentences’’ was presented by asking the subjects to read the passage on page 4 of “New Concept English for Junior Secondary Schools Book 2 titled “The old woman and the doctor” and answer the question below:

Identify and write out two topic sentences from the passage in the text written above.

Answers like the ones below were written by the students:

(i) **Paragraph 1:** An old woman, having lost the use of her eyes, called in a doctor to heal her, and made this bargain with him in the presence of witnesses: if he should cure her blindness, he would receive from her a sum of money; but if her infirmity remained, she would give him nothing.

(ii) **Paragraph 4:** The old woman, standing up in the court, argued, ‘this man here speaks the truth in what he says; for I did promise to give him a sum of money if I should recover my sight; but if I remained blind, I was to give him nothing’.

3. **Practice:** The subjects with their instructor read the passage mentioned in no. 2 above and at the end of the reading, questions like the one written below were answered by the students in order to test their vocabulary knowledge from the passage they have read.

Instruction: Match each of the words and phrases in A with a suitable synonym in column B.

Column A	Column B
bargain	illness
witnesses	claimed
infirmity	called upon
salve	confirm
insisted	an agreement
summoned	possessions
on the contrary	ointment
affirm	in contrast
chattels	observers

4. **Self-Evaluation:** The teacher encouraged the students to reflect and evaluate their reading comprehension ability as they use a bottom-up strategy at the word level which is "Identification of phrases as used in the passage". This could be done by asking the students questions like ''why did you say that using substitute/paraphrase helped you in understanding the passage''? The answers would help the subjects to evaluate their progress in comprehending the text.
5. **Expansion:** Lastly, the subjects were encouraged to make connections between language and content, and to apply strategies learned to their own lives independently in order to derive meanings from the passage. For example;

(i) What bargain did the doctor make with the old woman?
(ii) What time did the doctor steal the old woman's property?
(iii) What important factor helped the doctor to steal the old woman's things?
(iv) What did he do when the old woman did not keep her promise?
(v) Which word in the first paragraph can replace the word agreement as used in the passage?

3.9.5 Experimental Group 2 (Top-down Group)

The top-down group was trained on the top-down reading comprehension strategies borrowed from the researcher by (Harris, 2005; Rajabi, 2009; Smith, 1985) and they are:

(i) **Using background knowledge:** The teacher teaches the subjects that while they are reading the passage titled "bribery and corruption" on page 63 of their English textbook: New Concept English for Junior Secondary Schools 2, they should reconsider and revise their background knowledge about the topic based on the text's context and use the new information to clarify or modify their prior knowledge.

(ii) **Make Predictions:** As they are reading the text "bribery and corruption", they anticipated information and made logical guesses about what would happen in the passage.

(iii) **Making Inferences (use clues):** Again, as they progress in reading they use context and what they know to figure out meaning, read and listen between lines and go beyond the text to understand it meaning.

(iv) **Thinking of author's main idea(s):** As they continue to read the text, the subjects would be guided by the teacher to think of the author's main idea.

(v) **Skimming:** They read quickly in order to note only the important points.

The procedure was also Cognitive Academic Language Learning Approach – CALLA (Chamot and O'Malley, 2005). The procedures are Preparation, Presentation, Practice, Self-Evaluation and Expansion as illustrated below.

1. **Preparation:** The subjects were introduced to the idea of reading comprehension strategies and it was done by using subjects' background knowledge such as identifying main idea and listing names of characters. The students having read the passage titled "Bribery and Corruption" on page 71 of "New Concept English for Junior Secondary Schools Book 2", were asked questions like:
    1. Mention the author's main idea(s).
    2. List the names of the major characters in the passage.

When that was done, the students' interests were aroused to read and understand the comprehension passage their teacher presented in the step below.

2. **Presentation:** Having being motivated, one of the top-down reading strategies (inference) was presented by guiding the students to read the passage mentioned above by applying their prior knowledge and understanding text expression while the teacher served as a guide. For example:

a. What do you think the writer means by kola in the passage?

b. What should the government do in order to hit the nail of corruption on the head?

c. How do you think corruption can be stopped?

3. **Practice:** The subjects were taught using one top-down strategy such as mentioned above to present the lesson by getting them to arrive at clues from the passage to answer comprehension questions which will go a long way in helping them to understand text expression. For example, in a passage titled ‘‘Bribery and corruption’, on page 71 of “New Concept English for Junior Secondary Schools Book 2”, subjects were asked to use the following clues: “malpractice, “lecturer”, “played”, “expelled”, “Inspectors”, “corporal”, to answer the questions below:

   1. They were ---------- from the college for bullying a junior student.
   2. The guilty student was given ---------- punishment by the Principal.
   3. ---------- from the Local Education District office visited our school yesterday.
   4. Our form master said Abu failed the third term examination because he ---------- truant throughout the term.
   5. A university teacher is usually called a ----------.
   6. Some students rely on examination ---------- to pass difficult subjects.

Again, the teacher and the subjects used different topic sentences and expressions from the textbook mentioned above in the comprehension passage on 71 and relate them to their background knowledge in the process of comprehending a text. For example; sentences from the passage like “similarly, educational institutions are not left out”. Lecturers print their handouts and students are expected to buy them at fixed prices and if they refuse, they face the consequences”. Since the students have known the meaning of some words like “lecturer” in the step above, comprehending the sentences above will not be difficult for them.

4. **Self-Evaluation:** The teacher encouraged the subjects to assess their reading comprehension progress by practising and using background knowledge strategy they have been taught after reading the passage "bribery and corruption". This was done by asking the subjects question like "why did you say that using background knowledge helped you in understanding the passage''? The answers helped the subjects to evaluate their progress in comprehending the text.
5. **Expansion:** Lastly, the subjects were encouraged to make connections between language and content, and to apply strategies learned to their own lives independently in order to derive meanings from the passage. For example;

1. Why is corruption a "menace" in our national life?
2. Why and how should efforts at stopping corruption start?
3. Explain what the government would do to hit the nail of corruption on the head.

3.9.6 Step Four: Control group

Teachers in this group were allowed to teach reading comprehension using the method they are familiar with that is, they continued with their normal reading comprehension lessons. During the lesson, the teacher:

(a) asked the students to read a passage from Intensive English for Junior Secondary Schools Book 2, unit 2 on page 16 titled "controlling mosquitoes" for about five minutes;
(b) the teacher explained some words like malaria parasite, harbouring, contaminating and diagnosis and
(c) students were also asked to answer some questions from the passage for example,
    (i) How can Nigerians control mosquitoes?
    (ii) What is the writer's purpose?
    (iii) What measures will help to control mosquitoes?

3.9.7 Step Five: Post-test:

At the end of the treatment (8 weeks), a post-test was administered to the three (3) groups; bottom-up, top-down and control group. The three (3) groups were given the same reading comprehension passage. The question on the passage captured the four levels of reading comprehension stated by Supporting research (2010). That is, literal comprehension, interpretation, inferential comprehension and critical comprehension.

Literal comprehension captures bottom-up ability through the test of appropriate and bringing out meaning from the surface level. According to Karlin (1971) ability to read aids for literal meanings, that is, stated ideas is influenced by one's mastery of words meanings in context while interpretative, inferential and critical comprehension captures top-down ability through predicting, inferring and contextual meaning.

3.9.8 Step six: Marking of the subjects scripts

The test was collected and marked by the English language teachers that assisted the researcher and they were subjected for thorough analysis. Those answer scripts of the three groups (bottom-up, top-down and control) were actually marked using the agreed marking scheme on reading comprehension passages which was based on its response to literal, interpretative, inferential and critical meaning as marking scheme content. Scores were awarded based on the performance of the students. They were graded on the scale of 0-49 (low), 50-59 (middle) and 60-100 (high) and the mean score of students' performance were presented and analyzed.

3.10 Procedure for Data Analysis

The statistical technique that was employed to test the research hypotheses were analysis of variance (ANOVA) and t-test. It was used to determine the difference between the

performance of the three categories of subjects using high, mid and low performers and also between their performance at pre-test and post-test stages. This is to ensure that students' bottom-up responses capture the bottom-up treatment and top-down responses also capture top-down treatment. The research questions were answered by the comparison of the mean and standard deviation of the experimental and control groups respectively.

CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction

This chapter focuses on the analysis of data collected from the reading comprehension achievement test given to students. The data were analyzed in order to determine whether bottom-up or top-down reading comprehension strategies is the strategy that enhanced better comprehension of texts.

4.2 Presentation and Analysis of Results

The results are presented and analyzed in the following steps: the scores obtained by the students in the experimental and control groups. The research hypothesis is presented and analyzed at 0.05 alpha level of significance using t-test statistical tool and analysis of variance (ANOVA) as can be seen in the data presentation below.

Table 4.1 and 4.1.1 present the grading of students' performance and mean score in the experimental group 1 (bottom-up group) and control group in the schools**.**

Table 4.1: Grading of performance of students based on Reading Test

SCHOOL	GROUP	TEST	X	F	F (%)	LEVEL
GJSS Tudun-Jukun	Experimental Group 1	Pre-test	0-49	40	100	Low
			50-59	0	0	Middle
			60-100	0	0	High
		Post-test	0-49	34	85	Low
			50-59	2	5	Middle
			60-100	1	2.5	High
GJSS Gyallesu	Control	Pre-test	0-49	40	100	Low
			50-59	0	0	Middle
			60-100	0	0	High
		Post-test	0-49	37	92.5	Low
			50-59	0	0	Middle

	60-100	0	0	High

As indicated in 4.1, students in the experimental group 1 (bottom-up group) performed better than those in the control group with 2.5% and 5% scoring high and middle respectively in the experimental group while none was scored in the control. On the other hand, 85% scored low marks while 92.5% scored low marks in the experimental and control groups respectively. Although, none of the groups scored at the middle and high levels at the pre-test stage, there is remarkable improvement in the students' performance at the post-test level. In the experimental group, for instance, 2.5% scored high marks in the post-test while none was scored at the pre-test level. This implies that there was effect as the result of the treatment and it is evident from the table that 6 students were absent during the post-test, 3 from bottom-up and the other 3 from the control group.

Research Question 1: What is the difference between the reading performances of students taught reading comprehension using bottom-up reading strategy and those taught using conventional reading comprehension strategies?

Table 4.1.1 presents the mean score of students' performance in the experimental group 1 and the control groups.

Table 4.1.1: Mean Score and Standard Deviation of Experimental (Bottom-up) and Control Group

SCHOOL	GROUP	N	MEAN	SD
GJSS Tudun/Jukun	EXPERIMENTAL 1 (Bottom-Up)	40	30.38	11.624
GJSS Gyallesu	CONTROL (Conventional)	40	13.63	5. 772

Table 4.1.1 showed that the mean score of the experimental (bottom-up) group is 30.38 while that of the control group is 13.63. This implies that the experimental group performed better than the control group. This attest to this, the actual responses of students are clearly presented in table 4.1.2

Table 4.1.2 Qualitative Analysis of Actual Performance of Students taught Reading Comprehension by Bottom-up Strategies

Question	Question type	Level	Pre-test Response	Post-test Response
Control group Mention two groups identified by the writer as agents of bribery and corruption. **Answer** 1. Politicians 2. Educational institution	Literal	Low (No. 3)	Insurmountable social evil (x)	Insurmountable social evil (x)
		Moderate (No. 1)	social evil (x)	Politicians and the villagers (1/2)
		High (No.2)	bribery and corruption (x)	Politicians and Educational institution (√)
Experimental group 1	Literal	Low (No.7)	Ministries and local government (x)	Politicians and the villagers (1/2)
		Moderate (No.8)	Insurmountable social evil (x)	Politicians and Educational institution (√)
		High (No.4)	Ministries and Educational institution (1/2)	Politicians and Educational institution (√)

Table 4.1.2 showed clearly that as a result of the treatment given, the students performed better in the post-test than pre-test. This is because students in the low, moderate and high levels of the experimental group 1 got the correct answer compared to their performance at the pre-test where only one student got half mark at the high level. In the control group, two students at the moderate and high categories got half and full mark at the post-test response respectively. This shows that treatment was very effective and suggests that teaching reading comprehension with bottom-up reading strategies improved students' comprehension than those taught reading comprehension without techniques.

Table 4.2: Grading of Performance of students based on the Reading Test

School	Group	Test	X	F	F%	Level
GJSS Aminu	Experimental group 2	Pre-test	0-49	40	100	Low
			50-59	0	0	Middle
			60-100	0	0	High
		Post-test	0-49	18	45	Low
			50-59	12	30	Middle
			60-100	8	20	High
GJSS Gyallesu	Control group	Pre-test	0-49	40	100	Low
			50-59	0	0	Middle
			60-100			High
		Post-test	0-49	37	92.5	Low
			50-59	0	0	Middle
			60-100	0	0	High

Table 4.2 indicated that students in the experimental group performed better than those in the control group: 20% scored high grade in the experimental group while not a single student scored the same grade in the control grade. On the other hand, 45% scored low marks while 92.5% scored low in the experimental and control groups respectively. More so, since the scores of the students at the experimental group 2, that is 20%, 30% and 45% from high to low respectively were far better than the control group, it shows that there is effect of treatment on students and it is evident from the table that 3 students from Gyallesu and two from Aminu Junior Secondary Schools were absent during the post-test.

Research Question 2: What is the difference between the reading performances of students taught reading comprehension using top-down reading strategy and those taught using conventional reading comprehension strategies?

Table 4.2 and 4.2.1 present the outcome of students' performance in the experimental and control groups and grading of students' performance and the mean score in the experimental group 2 (top-down group) and control group in the schools. This is to show if there is efficacy of top-down reading strategy treatment on the comprehension ability of students in the experimental and control groups.

Table 4.2.1: Mean Score and Standard Deviation of Experimental Group 2 (Top-down) and Control Group

SCHOOL	GROUP	N	MEAN	SD
GJSS AMINU	EXPERIMENTAL 2 (Top-Down)	40	51.93	12.891
GJSS GYALLESU	CONTROL (Conventional)	40	13.63	5.772

As can be seen in Table 4.2, the subjects taught reading comprehension using top-down reading strategy had a mean score of 51.93 and a standard deviation of 12.891. Whereas, those taught reading comprehension using conventional reading method had a mean score of 13.63 and standard deviation 5.772. This shows that experimental group (top-down) performed better than the control group.

Table 4.2.2: Qualitative Analysis of Actual Performance of Students taught Reading Comprehension by Top-down Reading Strategies

Question	Question type	Level	Pre-test Response	Post-test Response
Control group What type of corruption is said to be common among universities lecturers? **Answer** 1. Sales of handouts 2. Sexual harassment by the female students	Literal	Low (No.6)	Beath rurai areas to canvass for vote dur. (x)	Kola. (x)
		Moderate (No.5)	Similarly educational institutions are not left out. (x)	Harassment by the lecturers of female students in our higher institution. (1/2)
		High (No.4)	There have been instance of harassment by the lecturers of female students in our higher institution. All these and more constitute corruption. (1/2)	Similarly, educational institution is not left out. Lecturers print their handouts and students are expected to buy them fixed prices and if they refused they face the consequences. (x)
Experimental group 2	Literal	Low (No.5)	Some people are of the opinion that have come to our culiar right from the village square community. (x)	Community to the seat of power in government, there are obvious signs and instances of bribery and corruption. (x)
		Moderate (No.7)	Corruption has continued to remain in our society. (x)	Gifts in cash. (1/2)
		High (No.8)	Lecturers print their handouts and students are expected to buy them (√)	Lecturers print their handouts and students are expected to buy them at fixed prices. (√)

Research Question 3: Which reading comprehension strategy has more effect on students' reading performance?

Table 4.3 presents the strategy in which students performed better in the experimental groups.

Table 4.3: Mean Score and Standard Deviation of the Control and Experimental Groups

Strategy	Status	N	Mean	S.D
Bottom-up	Experimental group 1	40	30.38	11.624
Top-down	Experimental group 2	40	51.93	12.891
Conventional	Control group	40	13.63	5.772

Table 4.3 reveals that experimental group 1 (Bottom-up) had a mean score of 30.38 while experimental group 2 and the control group, had a mean score of 51.93 and 13.63 respectively. The Table also shows that their respective standard deviation is 11.624, 12.891 and 5.772. From these result, it follows that the experimental group 2 (students taught reading comprehension by top-down reading strategy) performed best since their mean score (51.93) is higher than that of the other groups. This implies that teaching reading comprehension by top-down reading strategy enhances JSS 2 students' performance more than the other two methods.

Table 4.3.1 Qualitative Analysis of Actual Performance of Students taught Reading Comprehension using Bottom-up and Top-down Reading Strategies

Question	Question type	Level	Pre-test Response	Post-test Response
Bottom-up group Why and how should efforts at stopping corruption start? **Answer:** Corruption should be stopped because it has brought bad name for our country and the effort at stopping it should	Inferential and Critical	Low (No.2)	Bribery and corruption have continued to remain in our society as an insurmountable social evil. (x)	Government should decisive and total and not selective any giving short of this amounts to not hitting the nail on the head. (x)
		Moderate (No.6)	When the moment comes (x)	The cleansing must start from the top leaders in

start from the top government officials.			government. (√)
	High (No. 5)	By advising the people and the youth. (x)	The effort at stopping corruption should start from the top leaders. (√)
Top-down group	Low (No.1)	Are they right?	The effort at stopping corruption should start from the top leaders. (√)
	Moderate (No.4)	The cleansing must start from the top leaders in government. (√)	The general agreement that the evil must start from the top leaders in government. (√)
	High (No.2)	From the top leaders in government executives and agencies. (√)	Why because it is very bad how by stopping it from the top government agencies. (√)

As can be seen from table 4.3.1 students taught reading comprehension using top-down reading strategies performed better than those taught using bottom-up reading strategies both in the pre-test and post-test responses. This shows that top-down reading strategy is a better strategy than bottom-up reading strategy in teaching reading comprehension.

4.3 Analysis of Hypotheses

The following analyses were made in order to provide solution to the hypotheses formulated for this study. The hypotheses were tested at 0.05 levels of significance.

Hypothesis One

H_{O1}: There is no significance difference between the mean score performance of students taught reading comprehension using bottom-up reading strategy and those taught by the conventional method.

The null hypothesis is intended to show if the performance of students in the experimental group 1 who were taught reading comprehension using bottom-up reading strategy differed from that of students in the control group. Table 4.4 shows the student's t-test statistics analysis of the students.

Table 4.4 Paired Samples t-test Analysis of the performance of Experimental group 1 and Control group

GROUP	N	MEAN	SD	DF	t-VALUE	P-VALUE	DECISION
Experimental group 1	40	30.38	13.939	39	-7.600	0.001	Reject HO1
Control Group	40	13.63					

Significant at $P \leq 0.05$

From Table 4.4, the t-test analysis revealed a P- value of 0.001 which is less than 0.05. Therefore, the null hypothesis is rejected. This shows that there is a significant difference between the mean score of students taught reading comprehension by the bottom-up strategy and those taught using the conventional method.

Hypothesis Two

H_{O2}: There is no significance difference between the mean score performance of students taught reading comprehension using the top-down reading strategy and those taught by the conventional method.

The null hypothesis is intended to show if the mean score performance of students in the experimental group 2 taught reading comprehension using the top-down reading strategy would differ from that of the control group. Table 4.5 shows the student's t-test analysis of the hypothesis.

Table 4.5 Paired Samples t-test Analysis of the performance of the Experimental group 2 and Control group

GROUP	N	MEAN	SD	DF	t-VALUE	P-VALUE	DECISION
Experimental group 2	40	51.93	14.552	39	-16.646	0.0001	Reject HO2
Control Group	40	13.63					

Table 4.5 showed a t-value of -16.646 and a corresponding p-value of 0.0001. This value is less than 0.05 hence; it is significant therefore the null hypothesis 2 is hereby rejected. This implies that there is a significant difference between the mean score of students taught reading comprehension by top-down and those taught the same concept by the conventional method.

Hypothesis Three

H_{O3}: There is no significant difference between the reading performance of students taught reading comprehension using bottom-up, top-down and conventional reading strategies.

The null hypothesis is intended to prove whether there is any significant difference between the performance of students taught reading comprehension using bottom-up, top-down and the conventional reading strategies.

Table 4.6: ANOVA for the performance of the experimental and control groups

		Sum of Squares	**df**	**Mean Square**	**F**	**P**
Bottom-up	Between Groups	4892.361	4	139.782	3.66	0.0136
	Within Groups	377.014	35	38.192		
	Total	**5269.375**	**39**			
Top-down	Between Groups	5964.214	4	170.130	3.911	0.0100
	Within Groups	526.214	35	43.500		
	Total	**6480.775**	**39**			

From the analysis of variance (ANOVA) in table 4.6, the comparison of the three strategies show that a significant difference exists from the P- values obtained (P = 0.0136 and P = 0.0100). In order to see where this significance lies, the three strategies were subjected to the Scheffe's test of multiple comparisons. The result of this test is presented in Table 4.6.1

Table 4.6.1 Post Hoc Test for Multiple Comparisons of Strategies (Scheffe's Test)

Strategy		Mean diff.	Std. Error	Sig
Bottom-up	Conventional	0.0662	0.4632	0.352
	Top-down	0.2184	0.5616	0.011*
Conventional	Top-down	-0.1426	0.2172	0.318
	Bottom-up	-0.0662	0.4632	0.352
Top-down	Bottom-up	-0.2184	0.2172	0.011*
	Conventional	0.1426	0.5616	0.318

*Significant at the 0.05 level.

The Scheffe's test revealed that there is a significant difference between the Bottom-up and the Top-down reading comprehension strategies since P = 0.011 is less than P = 0.05. This is also evid√ent in the mean scores and standard deviation of their performance (30.38and 51.93) and (11.624 and 12.891) for bottom-up and top-down respectively. Therefore, top-down reading strategy is a better strategy in teaching reading comprehension in junior secondary school two than bottom-up reading strategy.

4.4 Summary of Findings

Below are the findings of the investigation.

1. The effect of bottom-up reading strategy on the comprehension performance of students is more than conventional reading method.
2. The effect of top-down reading strategy on the comprehension performance of students is better than conventional method employed by the teachers of the control group.
3. Top-down reading strategy has effect on the comprehension ability of students than bottom-up reading strategy.

4.5 Discussion of Research Findings

There is no doubt from the first finding of this study that when students were taught reading comprehension using bottom-up reading strategy; that is, employing techniques from down to up like word by word decoding strategy, vocabulary development, identifying phrases and sentence types, bringing out the topic sentences and so on, performed better than those in the control group who were taught without most of the techniques mentioned above. Although, the teacher in the control group used word by word decoding, the other techniques were not used by him. This shows that bottom-up reading strategy is not totally a poor reading strategy as argued by authors like Anderson (2003) and Nuttal (1996). To buttress this, subjects at the bottom-up group performed excellently well in identifying the topic sentences and changing word orders to find the correct words in the passages used.

In the same vein, proponents of the claim that bottom-up reading strategy improves comprehension of texts like Stanovich (1980), Nounoul (2013) Kamil (1988) and Eskey (1998) may have a point in this situation, because the top-down model of reading cannot be recommended for the less proficient or developing reader who might be, as generally accepted, more interested in developing grammatical skills such as cohesive devices and vocabulary recognition. Taking one step further, Cobb (1999) seems to agree with this argument by adding that word knowledge appears to be a key ingredient and an important contributor to second language academic reading success. This belief is also supported by Hirsh and Nation (1992) who shows that to comprehend an academic text, a reader needs to know 95% of the words. This implies that a text is comprehensible only when there is no more than one unknown words in every two lines.

Also, the second finding of this study revealed that students taught reading comprehension using top-down reading strategy performed better than those the teacher taught using conventional method. This is in line with argument on the superiority of top-down reading strategies over other strategies, when this strategy is employed, readers must activate their background knowledge about both the topic at hand and common writing structures (Andrews and Bond, 2009; Brown, 2007; Carrell, 1988; Eskey, 1988; & Smith, 1988). This explains why Martin (1979) argues that top-down model better represents how people read. These proponents argued that when students read a passage using other reading strategies, they concentrate on word meaning and often miss comprehension because they pay more emphasis on vocabulary. They advocated that students comprehend easily when they guess while reading. However, they did not remember the learners that are still acquiring reading skill. This shows why Weber (1984) states that the top-down reading processing strategies cannot account for all the needs of learners who are acquiring reading skills. By their arguments, it seems to suggest that top-down reading strategy must go beyond the classroom. This study has clearly shown that students taught reading comprehension using top-down reading strategy out rightly did better in the school under study with the mean scores of 51.93. Again, the finding showed that students taught reading comprehension using top-down reading strategy performed better than those taught using bottom-up reading strategy. This is in support of other findings by Goodman (1988), Carrell (1988) that top-down reading enhances comprehension of texts. That is, they believe that reading is perceived as an active process of comprehending where students need to be taught strategies to read more efficiently (e.g. guess from context, define expectation, make inferences about the text, skim ahead to fill the context, etc.) Furthermore, the same author, namely (Goodman, cited in Carrell and Eisterhold 1983) by comparing reading to a “guessing

game “, shows us that a reader becomes a message encoder. Although one could agree with Goodman’s interpretation, his opponents (Weber 1984, Paran 1996) must not be forgotten because it shows that the opinions varied as regards the act of reading. Paran (1996), for instance, rejects such a view of reading specifying that all the sentences are never read in the same way. He argues that readers rely on different cue-words to get a gist of what kind of sentence may follow, whereas Weber states that the top-down reading processing cannot account for all the needs of learners who are acquiring reading skills.

However, since students that were taught reading comprehension by top-down reading strategy performed better than those taught by bottom-up reading strategy, this could be due to the fact that top-down reading processing strategy is closely tied to the concept of schemas in second language acquisition. Brown (2007) refers to it as a “conceptually driven processing in which we draw on our own intelligence and experience to understand a text”. This is often described in terms of analyzing and creating meaning from the big picture of a text, unlike bottom-up processing, which involves decoding smaller bits of words and sentences to create meaning. Abbot (2006) explains the difference between bottom-up and top-down strategies; “bottom-up reading comprehension strategies are data-driven, detail-oriented strategies, whereas top-down strategies are conceptually driven, big-picture oriented strategies” Readers engaging in top-down processing draw on their previous knowledge (schemas) to interpret a text. Rao (2003) argues that “the more world-knowledge that a reader brings to the text, the less dependent he or she is upon purely linguistic information such as grammatical, syntactic and semantic clues, thus making his or her reading process more efficient”. Rao also argues that “the process of reading comprehension is guided by the principle that every input is mapped against some existing schema and that all aspects of that schema must be compatible with the

input information". In other words, top-down processing is dependent upon fitting new information into learners' previous knowledge (schemata). This study is of the opinion that teachers are the center of failure or success of the reading process. The teachers should expose the students to different reading materials in order to gain much prior knowledge; this will go a long way helping them to understand any given text using contextual guessing, inferring, skimming etc.

Therefore, the present study is of the view that top-down reading strategy should be used to teach reading comprehension in junior secondary school two as long as the texts are not above or below the readability of the learners. Therefore, this study is in agreement with Brown (2007), Abbot (2006) and Goodman (1988) that top-down reading process which is a conceptually driven processing in which we draw on our own intelligence and experience to understand a text facilitates comprehension of text. This is often described in terms of analyzing and creating meaning from the big picture of a text, unlike bottom-up processing, which involves decoding smaller bits of words and sentences to create meaning. It is easy to conclude that top-down reading strategy is the best to employ in order for students to comprehend texts. Nonetheless, where this is not possible due to poor reading foundation bottom-up reading can be integrated with top-down for better understanding. It is vital that the ability of students whether in lower or upper secondary school should be the primary basis to consider before teachers employ any of the strategies. This is because many students in (JSS 2) could not read a simple text. This goes a long way in showing that teachers in the primary schools must make sure that before the pupils will be promoted from especially primary four upwards that child must know how to read; this would help the child when he goes to secondary schools.

In addition, top-down reading strategy should be encouraged in lower secondary schools together with bottom-up reading strategy. This is due to the fact that most of the subjects that did well in the top-down group are well grounded in bottom-up reading strategy. This is in support of the views of Eskey (1988) and Olaofe and Masembe (2006) who view that fluent reading entails both skillful decoding and relating information to prior knowledge. It seems therefore reasonable to add that readers become good decoders and interpreters of texts gradually but surely only when they are familiar with both lower- level processes , to name just a few, translation of written code or morphological processing and higher level processes including activation of schemata or influence of attitude, motivation and reader interest. This follows that bottom-up and top-down reading strategies could be integrated in a reading comprehension class which is in contrast to the views of some scholars seen in the background to the present study.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter summarizes, concludes and offers recommendations based on the outcome of the collected and statistically analyzed data for the study.

5.2 Summary of the Study

The study focuses on the effect of bottom-up and top-down reading comprehension strategies on the reading achievement of some junior secondary school students in Zaria Inspectorate zone of Kaduna State. The research sought if bottom-up or top-down reading strategy that helps students comprehends texts easily. Based on this, three research questions were raised to determine which is better. These are: What is the effect of bottom-up reading strategy on the comprehension achievement of JSS students in Zaria Educational zone? What is the effect of top-down reading strategy on the comprehension achievement of JSS students in Zaria Educational zone? Which reading comprehension strategy (bottom-up, top-down or conventional) has more effect on students' reading performance?

Again, research instrument (reading comprehension achievement test) was used to gather data. Teachers for the experimental groups were rigorously trained on the techniques for teaching reading using bottom-up and top-down reading strategies. Subsequently, students were taught reading comprehension using other passages for the experimental and control groups in the three schools. A reading achievement test was administered to students and the results were collected. T-test and analysis of variance (ANOVA) statistical tool were employed to determine the mean score of students and to measure the level of significant. The general findings from the analysis of the data and test of the study's hypotheses are summarized below:

1. Bottom-up reading strategies enhances pronunciation, arrangement and spelling of words which are the foundations for comprehension.
2. Top-down reading strategies facilitates students' ability to comprehend texts.
3. The reading performance of students in the experimental groups was significantly different from the performance of students in the control group.
4. Integrating the two approaches would be more effective than the separate bottom-up and top-down instructions since the subjects in the top-down group were able to answer questions emanated from bottom-up group and thus could more greatly benefit students' proficiency.
5. Top-down reading comprehension strategies had more effect on inferential and critical levels of reading comprehension.

5.3 Implications of the Findings

The major finding from this study is that top-down reading strategies could significantly improve the reading performance of Junior Secondary School Students in Zaria Inspectorate Zone of Kaduna State. It was observed that the top-down reading strategy was rarely used in junior secondary schools. The finding will therefore help in finding solution for improving the reading performance of students in junior secondary schools.

Again, significant difference was observed between those students who were exposed to top-down treatment in teaching reading comprehension compared to those taught via bottom-up and traditional methods. The students taught reading comprehension by top-down reading strategies were actively involved throughout their lessons periods than those taught reading comprehension by bottom-up reading strategies who were just passively involved. This can be seen in the mean score of the top-down group 51.93 and 30.38 for bottom-up group.

Therefore, junior secondary school administrators as well as the curriculum developers should support the junior secondary school teachers both financially and professionally to develop them through workshops and seminars to supplement their teaching of reading comprehension across curriculum via top-down reading comprehension strategies. This would, in line with the finding of this study, cater for students' individual differences, arouse their interest to learn, and improve their academic performance.

More so, the conceptual framework of this study could be of immense help to t e junior secondary teachers if adapted because it will improve the reading performance of the students which is paramount in reading comprehension.

5.4 Recommendations

Based on the findings of this study, the following are recommended:

1. Bottom-up reading strategy should be used to teach the primary school pupils, these would go a long way in helping them to read any given text without difficulty because it was discovered in this study that some junior secondary school students could not read fluently. The steps below will guide a language teacher when teaching reading comprehension in the primary school via bottom-up reading strategy:
    i. The teacher should select suitable passages from any of the following: newspaper, magazines, pupils recommended text and photocopy of excerpts.
    ii. Select techniques for teaching, e.g. arrangement of words, matching of words, identification of topic sentences and so on.
    iii. Pupils should read the selected passages aloud and individually.
    iv. They (pupils) should answer questions asked by the teacher orally or in a written form.

2. Mastery of the bottom-up skills is the most difficult for students and the successful interpretation of text cannot be realized without accurate understanding of the text so language teachers should arouse the interest of the learners to use top-down reading strategies effectively.
3. To enhance top-down reading skill in junior secondary schools, language teachers would go beyond the school recommended texts to photocopy excerpts from magazines, newspaper, novels and journals to mention but a few to effectively teach reading comprehension using top-down reading strategies by first and foremost arousing the students' background knowledge to enable the students to be actively involved using top-down reading strategies like inference, prediction and contextual guessing.

4. Trainings should be organized frequently to update teachers of English on the techniques required to teach reading comprehension using bottom-up and top-down reading strategies effectively.

5.5 Conclusion

The study has been able to compare the effect of bottom-up and top-down reading comprehension strategies on the reading performance of junior secondary school students in Zaria Inspectorate Zone of Kaduna State. The findings showed that;

1. Both bottom-up and top-down reading strategies had effect on students' reading performance,
2. The study also found that top-down group performed better than bottom-up group together with the conventional group across the four levels of reading comprehension, although bottom-up group performed higher at the literal level.
3. The use of top-down reading strategy to teach reading comprehension increases students' ability to read and comprehend text effectively without any much difficulty.

5.6 Suggestions for Further Studies

The following areas are suggested for further studies:

1. Effect of using top-down skills to increase reading comprehension.
2. Effect of bottom-up, top-down and integrated reading comprehension strategies on the reading performance of senior secondary school students.

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APPENDIX 1

LETTER OF INTRODUCTION

AHMADU BELLO UNIVERSITY, ZARIA
FACULTY OF EDUCATION
DEPARTMENT OF ARTS AND SOCIAL SCIENCE EDUCATION

Our Ref: DASSE/S.1 *Date:* 6/4/14

Dear Sir,

STUDENTS' ~~FILED~~ FIELD RESEARCH

The Department of Arts and Social Science Education, Ahmadu Bello University, Zaria requires each student working for a Degree to complete a research Thesis/Project. Our students entering the final year of their studies will be collecting data during the year.

Most of them will need to be allowed access to certain relevant documents and some valuable information which you may have.

Please give assistance as much as possible.

TOPIC OF RESEARCH:
THE EFFECT OF BOTTOM-UP AND TOP-DOWN READING STRATEGIES ON THE READING ACHIEVEMENT OF SOME JUNIOR SECONDARY School (JSS) STUDENTS IN ZARIA

Thank you for your continuing cooperation.

Yours sincerely,

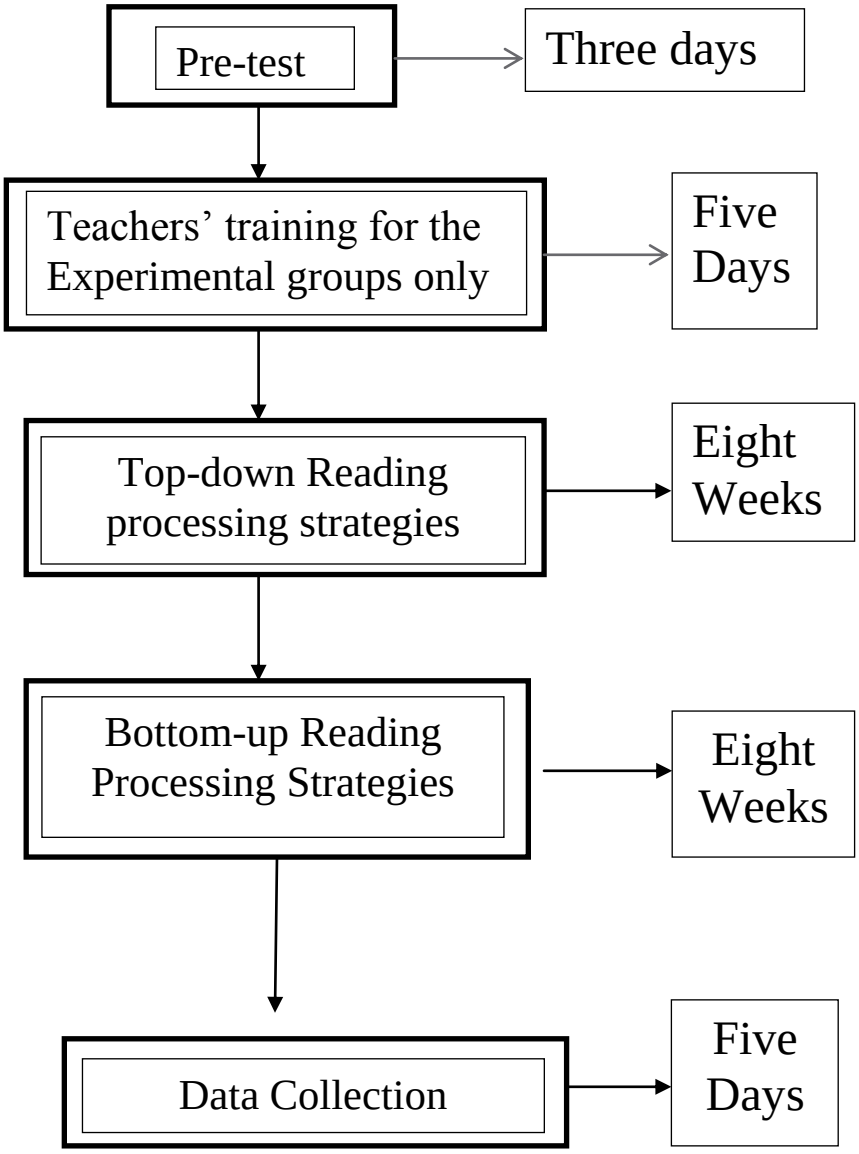
ARTS & SOCIAL SCIENCE EDUC FACULTY OF EDUC A.B.U. ZARIA
DATE 6/4/14
SIGN

Research Adviser

JSS I

Govt. Junior Secondary School Amnau, S/Sari, Zaria
Sign... Date...

APPENDIX II:
RESEARCH PROGRAMME PLAN



DURU (2015)

APPENDIX III:
LESSON PLAN OF ONE OF THE LESSONS TAUGHT BY A TEACHER OF THE EXPERIMENTAL GROUP 1 (BOTTOM-UP)

School	Government Junior Secondary School Tudun-Jukun
Class	J. S. S. II
Sex	Mixed
Subject	English Language
Topic	Reading Comprehension titled "The old woman and the doctor" using bottom-up strategy (Identification of topic sentences from comprehension passages).
Instructional material	Learners' textbook (New Concept English 2 for Junior Secondary schools), chalk and chalkboard.
Behavioural objective	At the end of the lesson, the learners should be able to read the comprehension passage on page 4 of the above mentioned textbook and identity the topic sentences.
Previous knowledge	The students have been reading and answering comprehension questions
Introduction	The teacher introduces the lesson by asking the students' questions based on their previous knowledge in order to arouse their interest. For example, "what is a sentence?"
Presentation	The teacher presents the lesson following the steps below:
Step 1	She writes the subject, topic and date on the chalkboard.
Step 2	She instructs the students to read the passage silently for about 5 minutes, after which she reads for them. While reading, she tells them to listen carefully to enable them pronounce words they are not familiar with. After reading, she points at two students to read for the class one after the order.
Step 3	In this step, the teacher guides the students to understand that "a passage is made up of key sentences; each paragraph in every passage has a topic sentence which summarizes the main idea of that paragraph. It is usually, but not always, the first sentence in a paragraph. It could also appear in the middle or end of a paragraph and another name for it is "*focus sentence".* Now, having known what a topic sentence is, the students could be asked to write the topic sentence of every paragraph from the passages they have read.

Step 4	The teacher reads the first paragraph and writes the topic sentence on the board. She also tells the learners the position it occupies in the paragraph. For example; "An old woman, having lost the use of her eyes, called in a doctor to heal her, and made this bargain with him in the presence of witnesses: if he should cure her blindness, he would receive from her a sum of money; but if her infirmity remained, she would give him nothing". She explains to the students that the topic sentence above is written in the beginning of the first paragraph.
Evaluation	The teacher evaluates the lesson by asking the students to identify the remaining topic sentences from the passage and write them on their English notebook.
Conclusion	She concludes the lesson by writing the correction for the learners on the board and also by marking their books. After that she gives them an assignment to write at home.

APPENDIX IV:
LESSON PLAN OF ONE OF THE LESSONS TAUGHT BY A TEACHER OF THE EXPERIMENTAL GROUP 2 (TOP-DOWN)

School	Government Junior Secondary School Aminu
Class	J. S. S. II
Sex	Mixed
Subject	English Language
Topic	Reading Comprehension titled "Bribery and corruption" using top-down reading strategy (inferences).
Instructional material	Learners' textbook (New Concept English 2 for Junior Secondary schools), chalk and chalkboard.
Behavioural objective	At the end of the lesson, the learners should be able to read the comprehension passage on page 66 of the above mentioned textbook and answer the comprehension questions using inferences (clues) that would be given by the teacher.
Previous knowledge	Revise inference by reading aloud the text to be used for the lesson for the lesson and asked students to connect their experiences to the students.
Introduction	Revise self-questioning to ensure that students understood how to use it to gain comprehension from the passage.
Presentation	The teacher presents the lesson following the steps below:
Step 1	Share the students in groups.
Step 2	Students read in their various groups while the teacher guides them to give feedback as they work by listening to one another think aloud.
Step 3	Guide them to go beyond getting the fact in the text by making an assumption. Encourage them to think about what those facts mean to them.
Step 4	Give a model reading using inference beginning from the topic until the entire passage is read. That is, ask them if they have ever heard about 'bribery and corruption?' What can they deduce from it? Different answers would be given.

Evaluation	Questions like the ones written below would be asked a. What do you think the writer means by kola in the passage? b. What should the government do in order to hit the nail of corruption on the head? c. How do you think corruption can be stopped?
Conclusion	Ask them to state how they used "inference" to answer the comprehension questions. Encourage them to expand the knowledge they have gained from the strategy to other subjects.

APPENDIX V:
LESSON PLAN OF ONE OF THE LESSONS TAUGHT BY A TEACHER OF THE CONTROL GROUP

School	Government Junior Secondary School Gyallesu
Class	J. S. S. II
Sex	Mixed
Subject	English Language
Topic	Reading Comprehension titled "Bribery and corruption."
Instructional material	Learners' textbook (New Concept English 2 for Junior Secondary schools), chalk and chalkboard.
Behavioural objective	At the end of the lesson, the learners should be able to read the comprehension passage on page 66 of the above mentioned textbook and identity the topic sentences.
Previous knowledge	The students have been reading and answering comprehension questions
Introduction	The teacher introduces the lesson by asking the students questions based on their previous knowledge in order to arouse their interest. For example, "what is the topic of the passage we read previously on 4 of the above mentioned book? One of the students answered "the old man and the doctor"
Presentation	The teacher presents the lesson following the steps below:
Step 1	The teacher says, open to page 66, I am going to read while you read quietly.
Step 2	He also writes the title of the comprehension passage "bribery and corruption" on the board. Then he reads the passage. (He stops at intervals and asks, "is that clear"?)
Step 3	Students: yes.
Step 4	The teacher says, "have you opened" the page? Students: yes
Step 5	The teacher reads the passage while the students listen attentively.
Step 6	He points at a student to read, after reading a passage, he calls another student by name to continue with the reading until the three paragraphs have been read (while they read, he pauses and explains the content of the passage).

Evaluation	He asks them questions like “what bargain did the doctor make with the old woman?”
	Students: (students bid by raising their hands and then the teacher points at Aminu). Answer: “if the doctor would cure her blindness, she would give him a sum of money but if her ailments remained, she would give him nothing. The teacher asked again, “what time did the doctor steal the old woman’s property?
	Students: (Abu raises his hand up and answers “when she has not been healed by the doctor”.
	Very good says the teacher the bargain she made with the doctor was “if the doctor could cure her blindness, she would give him a sum of money but if her ailments remained, she would give him nothing.
Conclusion	The teacher concludes by asking them to answer the comprehension questions.

APPENDIX VI
Department of Arts and Social Science Education
Ahmadu Bello University, Zaria.

The Civil Service

Instruction: Read this Comprehension passage carefully and answer the questions that follow on the foolscap paper given to you.

The public service refers to the arm of government whose primary responsibility is the implementation of government policies and programmes in accordance with the established rules and procedures. It includes not just the civil service but also political appointees and commissioners, judicial officers, local government employees of public corporations and members of the armed forces. The general term that embraces the officials of the civil service and other government departments and units is public servants.

The civil service (being a part of the public service) is a body of employees responsible for planning, giving advice and implementing policies in government ministries and departments. These employees are called civil servants. Government ministries are headed by ministries or commissioners and assisted by directors-general (permanent secretaries), as well as other departmental heads.

The civil service is well structured into classes. Civil servants are grouped into administrative, executive, professional, clerical and auxiliary classes. The administrative classes comprise the most senior civil servants who organize and coordinate the activities of the ministries. They execute high level administration work, and advise ministries in the formulation and implementation of policies. The executive class implements the general policies and programmes of the government on a daily basis. They supervise and control the activities of the activities of their subordinates and help to collect facts that aid in making

policy decisions. The professional classes of officers are recruited as a result of their specialized training, skills, scientific and technical knowledge. This class includes lawyers, doctors, engineers, architects, accountants and teachers. The clerical class includes typists, clerical officers and assistants well as secretaries. Their job involves keeping the records, movements of files, preparation data and vouchers and payment of claims. The auxiliary class includes cleaners, drivers, painters, messengers, porters and gardeners. Their job involves manual labour.

(Adapted from New Concept English for Junior Secondary Schools 2)

Comprehension questions

1. What is the main function of the public service?
2. Mention four members of the public service.
3. Who are the public servants?
4. How many classes are there in the civil service?
5. Which word in the first paragraph means the same as political office-holders?
6. Under which of the following classes do painters belong in the civil service?
7. Which of the following can replace the word recruited as used in the third paragraph?
8. The word it as used in the first paragraph refers to what?
9. Change the word order of the letters below to find five words from the passage
    i. bcilup ii. tamentionimple iii. dastelibshe iv. isuorbdestna v. etdiurecr
10. Write other words or phrases that can be used to replace the words below as used in the passage.
    a. manual b. aid c. embraces d. primary e. auxiliary

APPENDIX VII
Department of Arts and Social Science Education
Ahmadu Bello University, Zaria.

The old woman and the doctor

Instruction: Read this Comprehension passage carefully and answer the questions that follow on the foolscap paper given to you.

An old woman, having lost the use of her eyes, called in a doctor to heal her, and made this bargain with him in the presence of witnesses: if he should cure her blindness, he would receive from her a sum of money but if her infirmity remained, she would give him nothing.

This agreement being made, the doctor, time after time, applied his salve to her eyes, and on every visit took something away, stealing all her property little by little. And when he had got all she had, he healed her and demanded the promised payment.

The old woman, when she recovered her sight and saw none of her goods in the house, would give him nothing. The doctor insisted on his claim and, as she still refused, summoned her before a Judge.

The old woman, standing up in the court, argued: "This man here speaks the truth in what he says, for I did promise to give him a sum of money if I should recover my sight, but if I remained blind, I was to give him nothing. Now he declares that I am healed, I, on the contrary, affirm that I am still blind; for when I lost the use of my eyes, I saw in my house various chattels and valuable goods. But now, though he swears I am cured of my blindness, I am not able to see a single thing in it."

(Adapted from New Concept English Book 2 for JSS).

Comprehension questions

1. What bargain did the doctor make with the old woman?
2. What time did the doctor steal the old woman's property?
3. What important factor helped the doctor to steal the old woman's things?
4. What did he do when the old woman did not keep her promise?
5. Do you think the old woman will be convicted of fraud by the Judge? Why?
6. Which of the following words means the same thing as a doctor?

   i. Witness ii. Infirmity iii. Chattels iv. Physician
7. Which word in the first paragraph can replace the word agreement as used in the passage?

   i. Affirm ii. Contrary iii. Summoned

   iv. Bargain
8. According to the passage, what is the old woman's infirmity 'infirmity'?
9. Why did the old woman say 'I am still blind'?

10. When did the doctor finally heal the old woman?

APPENDIX VIII
Department of Arts and Social Science Education
Ahmadu Bello University, Zaria.

Bribery and Corruption

Instruction: Read this Comprehension passage carefully and answer the questions that follow on the foolscap paper given to you.

Bribery and corruption have continued to remain in our society as an insurmountable social evil. Some people are of the opinion that they have come to stay as part of our culture. Right from the village square, among the rural community, to the seat of power in government, there are obvious signs and instances of bribery and corruption.

For example, a politician who has gone to the rural areas to canvass for votes during elections has not started if he begins to address the villagers without first presenting kola. Besides, he would be expected to beam his torchlight to demonstrate his seriousness. The rural dwellers argue that that is the only way to get their share of the national cake or their democracy dividends. Are they right? The 'ten percent' has become an official jargon among those who deal in contracts within private and public agencies, ministries and local governments.

Similarly, educational institutions are not left out. Lecturers print their handouts and students are expected to buy them at fixed prices and if they refuse, they face the consequences. On the more note, there have been cases in which rich students give lecturers gifts in cash during festivals and, in turn, they are considered when the moment comes.

There have been instances of sexual harassment by the lecturers of female students in our higher institutions. All these and more constitute corruption.

The monster is a national social evil and will remain a menace in our national life. Opinions tend to the general agreement that the evil must be fought from the top. The cleansing must start from the top leaders in government, executives and agencies. The approach by the government should be decisive and total and not selective. Anything short of this amounts to not hitting the nail on the head.

(Adapted from New Concept English Book 2 for JSS).

Comprehension Questions

1. Mention two groups identified by the writer as agents of bribery and corruption.

1b. Write out two topic sentences from the passage.

2. From what you have read, what do you think the writer means by Kola in the passage?

3. What type of corruption is said to be common among university lecturers?

3b. Change the word order of the letters below to find five words from the passage.

i. vasscan ii. stratedemon iii. mentrassha iv. endsdivid v. surtablemounin

4. From the passage, what does the writer refer to as “the monster” in the last paragraph?
5. Explain what the government would do in order to hit the nail of corruption on the head.
6. Why is corruption “a menace” in our national life?
7. Why and how should efforts at stopping corruption start?
8. What does the word <u>they</u> refer to as used in line two in the first paragraph?

APPENDIX IX

RAW SCORES OF THE EXPERIMENTAL GROUP 1 (BOTTOM-UP)

SERIAL NUMBER	PRE-TEST	POST-TEST
1	00	25
2	00	05
3	10	30
4	00	15
5	10	30
6	00	40
7	05	40
8	15	25
9	00	10
10	00	40
11	15	40
12	10	50
13	10	55
14	10	15
15	10	25
16	10	15
17	15	45
18	10	30
19	10	-
20	10	35
21	10	30
22	10	-
23	05	-
24	05	35
25	00	30
26	00	10
27	00	30
28	00	00
29	00	00
30	00	20
31	00	20
32	00	30
33	00	10
34	00	10
35	00	20
36	00	10
37	05	60
38	00	00
39	00	20
40	00	20

APPENDIX X

RAW SCORES OF THE EXPERIMENTAL GROUP 2 (TOP-DOWN)

SERIAL NUMBER	PRE-TEST	POST-TEST
1	10	30
2	00	70
3	10	20
4	00	20
5	10	10
6	40	-
7	00	50
8	20	80
9	30	-
10	30	30
11	30	40
12	30	80
13	20	20
14	10	20
15	10	-
16	10	20
17	10	00
18	15	30
19	10	30
20	10	30
21	10	-
22	10	20
23	10	30
24	10	10
25	10	20
26	10	-
27	10	-
28	00	00
29	00	25
30	00	10
31	00	00
32	00	00
33	00	50
34	00	10
35	00	20
36	00	10
37	00	20
38	00	10
39	00	10
40	00	10

APPENDIX XI

RAW SCORES OF THE CONTROL GROUP

SERIAL NUMBER	PRE-TEST	POST-TEST
1	00	15
2	10	30
3	20	00
4	25	20
5	00	00
6	00	10
7	20	20
8	10	00
9	15	05
10	15	15
11	15	20
12	10	20
13	10	20
14	10	00
15	10	10
16	10	00
17	10	10
18	00	00
19	00	00
20	00	00
21	00	10
22	10	10
23	05	05
24	00	00
25	00	00
26	05	-
27	05	-
28	00	05
29	00	00
30	00	00
31	00	00
32	00	00
33	00	05
34	00	00
35	00	00
36	00	00
37	00	-05
38	00	00
39	00	00
40	00	00

APPENDIX XII

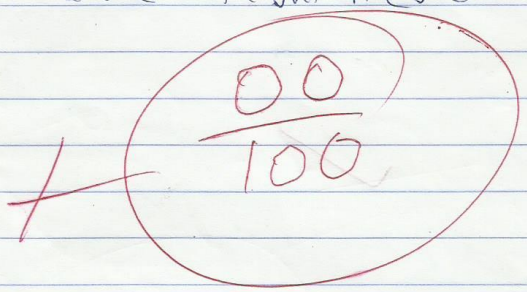
3
J552C 9/03/2015

G.J.S.S. GYALLESU

~~for example a politican who dis th~~

. institutins ar. end t left out ri.corom mets ✓

① national
② canuass
③ national
④ d.ividends
⑤ considered



⑥ harassment ✓

dividends Are they risatd p ii. Theon t thirfficiarem
⑨ deal in contracts witnis
the monsteer.
there ~~ha~~ re.been ins.nces of considered wirenmo
nieber institi tens e.nd re corrstecorruption.

~~⑩ the monsteris arrival secretary mentamen~~
⑩ Lookout and write two ② topic Sciences.
① deisire ✓
② Selective ✓

Instnciontionisee sis.pas fuinn.or tne sonst hat

APPENDIX XIII

JSS 2C 2

Name = G-J-S-S- GYALLESU

1- to the seat of power in government. There are obvious signs and instance of bribery Corruption

2- Hate during elections has not started if he begins to address the villagers ~~without~~ first presenting him

4- The monster is a national social evil and will remain a menecein our national life

5- government should be decisive and total and not selective. Anything short of this amounts to not hitting the nail on the head.

6- a menacein our national life opinions tend to the general agrement that the evil must be fought the top.

7- harassment by the lectures of female student in our higher institution-

8- canvess (i) demonstrate iii trasshament iv. dividends v. mouninsurtable

9-

10- what does the ~~word~~ they refers to as used in line 2 in the paragraph

05/100

APPENDIX VIX

class JSS 2C

G-J-S-S-GYALLESU

(1) insurmountable socialevil

(2) Bribery and corruption

(3) election

(4) ~~Ten percent~~ The munster a ~~national~~ social evil and will remain a menaceiin our national life.

(5) Leaders in guverment, ~~executives~~ and agencies.

(6) General ~~agreement~~

(7) harrassment The lectures of female student in our higher institution.

(8) canvass
demostrate
harrasment
divident
insurmountable

(9) Bribery and curruption

(10a) Politician

(10b) rural

APPENDIX XV

GTSS 2H06(B) ~~Tudyjukn Zaria~~ 11/03/2018-

Tudyjukn Zaria

Ahmad Abubakar

200

1) insurmountable social evil
national cake or Their democracy dividends.

1b) bribery and corruption School corruption

2b) Kola Besides he would be expected to bear his hatchlight to demonstrate his seriousness

3) democray dividends Are They right
rural community to the seat of power in government
demonstrate his seriousness the rural
~~national cake or~~ obvious sign and in sitences of bribey
and corruption

Wass can — can wass
Straledemon — demostrate
molasshar — harassment
onidsdivid — dividends
Surtasle mounin — insurmountable

(4) The monster is a national social evil and will remains anmesa
in our national lie

5) Right from the village square among the rural community
to stelly of power in gouvernment

6) For example a politician who has to the rural areas to canvass
for votes during election

(7) Similarly. educational institutions are not our lecturers in
their handaws and students

APPENDIX XVI

55/100

C.J.S.S Tudun/Fulani Zaria
J.S.S TWO [2]

(1) Insurmontable social evil
harassment

(b) Bribery and corruption have continued to remain in our society as an insurmountable social evil.

(2) Kola means Bribery

(3) Sexual harassment.

(6) i-Nasscan = Canvass
ii-Stratedemon = Demonstrate
iii-menfrassha = harassment
iv-Endsdivid = dividends
v-Surtablemountin = ~~Insur~~ Insurmountable

(4) monster is a national social evil and will remain a menance in our national life

(5) The approach by the government should be decisive and total and not selective

(i) Because a monster is remain

(7) It will start from the top leaders in government, executives and agencies.

APPENDIX XVI (CONT'D)

⑧ They refers to national peace and democracy dividends.

APPENDIX XVII

11/3/2015

class J.S.S 2A

G.J.S.S. Tudun Wada Kura

1, Insurmountable social group ✓

2, rural community group

60/100

1, Bribery and carryption have continued to remain in our society as ~~part of our~~ ✓ an insurmountable socia evil. ✓ 10

2, the master is a national social evil and will remain a menage in our national life ✓ ✓

2b bribery ✓

3, sexual harassment ✓

3b canvass ii demonstratee iii harassment

iv dividens v- Insurmountable ✓

4) bribery and corruption ✓

5 excuture arm of the government ✓ 0

6

1) from the top leather of the government

ii) bribery and corryption ✓

2, the master ✓

APPENDIX XVIII

Aminu Secondary school

Name: ... SS2B

20/100

Topic: english

(1) Mention two groups identified by the writer as agents of bribery and corruption?
Bribery and corruption have continued to remain in our society as an insurmountable social evil
(i) insurmountable
(2) social evil.

(1b) write out two topic sentences from the passage.
(i) Bribery and corruption
(a) From what you have read what do you think the writer means by 'old' the passage?
'old' Besides, he would be expected to be on his toes right to demonstrate his sincerity
(3) among the community
(3b) Change the word order of the letters below to find
(4) From the passage, what does the writer mean by the monster is a national social evil can remain a menace in our national life.
(5) Government should be decisive and tolerant selective
(6) a menace in our national life.
(7) should be decisive and total not sincere.
(8) harassment

APPENDIX XIX

Name
J.S.S 2B
Date 16-3-2015
School Aminu Government day secondary school

50/100

1 Lack of envy and also is ways that our leader behaves this is the reason why we have bribery and corruption in country.

b bribery and corruption.

2 Kola means to bribe somebody with things or money.

3. this means that ~~teachers~~ student bribe teachers with money so that they can print their handouts this ~~is the~~ type of corruption that is in our university.

b vasscan means support or persuade.
Statedemon means
mentrasscha means
endsdivid means
surtablemountin means too great to overcome/too powerful

4 Monster is a national social evil and will remain a menace in our national life opinions tend to the general agreement that the evil must be fought from the top.

5 is to ~~descomment~~ the People that ~~is dor~~ is causing corruption in our social ~~environ~~ environment or country.

~~b because our le~~

6 IS because of our leader that is why bribery and corruption ~~is~~ is ruling our nation and also our community.

APPENDIX XIX CONT'D

4 is by having good Leader in our nation or Community in our social environment

8 It word means having Corruption in our country and also in our Social environment

APPENDIX XX

Name: Class: 2a

Subject: English Date: 16/3/2015

School: Aminu gouerment secondary School

80/100

(1) a polirican
Education al inBtitution

(2) Bribery
Corruption

(3) kola means metairal thing the gouerment should giue themmer airal thing

(4) Student given gift to the lea Cterers

(2) i canuass
ii demonstrate
iii harassment
iv dividends
v insurmountable

(5) monster means national social Evil

(6) the gouerment must be decisive and total, and not selective

(7) no i it's a sin i it's Bad
i it is wickedness

(8) From the top leader in gouerme nt, Executives and agencies

APPENDIX XX CONT'D

7. Corruption means when some with power is dishonest
Bribery is given gift for some thing against the law
Example
a man a motorcycle and in the law motorcycle is found than policiman stop him and the man gave the policia 100,000 than the policim an allowed the man to go is bribery

8. Bribery
Corruption

EFFECTS OF BOTTOM-UP AND TOP-DOWN READING STRATEGIES ON STUDENTS' READING COMPREHENSION ACHIEVEMENT OF JUNIOR SECONDARY SCHOOL II STUDENTS IN ZARIA EDUCATIONAL ZONE

BY

DURU Helen Ifeoma

M.ED/EDUC/4123/11-12

DEPARTMENT OF ARTS AND SOCIAL SCIENCE EDUCATION
FACULTY OF EDUCATION
AHMADU BELLO UNIVERSITY, ZARIA

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