

**EFFECT OF COOPERATIVE LEARNING STRATEGY
ON STUDENTS' SELF CONCEPT AND
ACHIEVEMENT IN READING COMPREHENSION**

BY

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TITLE PAGE

**EFFECT OF COOPERATIVE LEARNING STRATEGY ON
STUDENTS' SELF CONCEPT AND ACHIEVEMENT IN READING
COMPREHENSION**

**A THESIS SUBMITTED TO THE DEPARTMENT OF EDUCATIONAL
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BY

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CERTIFICATION PAGE

Obida, Audu Joseph, a postgraduate student in the Department of Educational Foundations Number PG/Ph.D/08/49585 has satisfactorily completed the requirement for the degree of Doctor of Philosophy in Educational Psychology. The work embodied in this thesis is original and has not been submitted in part or full for any Diploma or Degree of this or any other institution

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DEDICATION

To My Parents

Corporal Audu Idoma Obida and Mrs. Omada Ude Audu Obida

For their Love and Care

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The accomplishment of this huge endeavour is undoubtedly gratifying. This success story cannot be told without acknowledging certain individuals, along with God's ceaseless grace and mercy. To these individuals the researcher shall remain grateful.

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Abstract

The study sought to investigate the effect of the cooperative learning strategy on students' self concept and achievement in reading comprehension. To guide the study, six research questions and six research hypotheses were formulated. The non equivalent control group pre test – post test design was employed. A sample of 105 students was drawn from the population and assigned into experimental and control groups. The researcher- designed instruments used for the study were the Reading Comprehension Achievement Test and Students' Self Concept Scale, which were validated by experts and trial tested. Data generated were analysed using mean scores, standard deviations and Analysis of Covariance (ANCOVA). Major findings of the study revealed that students exposed to the cooperative learning strategy had higher achievement mean scores in reading comprehension and self concept than students taught using the conventional method of instruction. Other findings revealed that location had no significant effect on the reading comprehension and self concept mean scores of students'. Nonetheless, urban and rural students in the experimental group performed better than those in the control group. The findings also revealed that there was significant interaction effect of treatment and location on the reading comprehension achievement mean scores of students. Based on the findings made, conclusions were drawn and some educational implications highlighted. The conclusions drawn showed the cooperative learning strategy was effective in students' reading comprehension and was effectual in enhancing students' self concept, among others; while educational implications highlighted were how the cooperative learning strategy could be used as a veritable tool for improving students' achievement and mitigating school based interpersonal social problems. Some of the recommendations included the need to sensitise teachers, school counsellors, textbook writers, and proprietors of schools, through conferences and seminars, to the cooperative learning strategy, as well as redesign the teacher -education curriculum to incorporate the cooperative learning strategy, among others.

CHAPTER ONE

INTRODUCTION

Background of the Study

Education has been viewed, globally, as a means to increase opportunity, inculcate societal values and norms, and foster upward social mobility. The attainment of these noble objectives will remain a mirage if students do not acquire appropriate skills essential for reading and the comprehension of printed materials. Reading comprehension involves the ability of students to recognise words quickly and effectively. Reading is vital to knowledge acquisition because knowledge is stored in written form. The role of reading is so crucial to academic achievement that Muodomogu (2005) observes that reading proficiency correlates highly with scholastic excellence and growth in professional career. It is a process of communication involving both the acquisition of meanings intended by the writer and the reader's own contribution in the form of interpretation, evaluation and reflection of these meanings. Reading comprehension is seen as the level of understanding of writing (Brummit, 2012). It is the reader's ability to recognise words in texts and make meaning intended by the writer. However, for certain obvious reasons which include poor teacher instructional strategy, poor parental background, among others, students may find it difficult sometimes to recognise words, much less comprehend the writer's intended meaning (Amao, 2005; Ekpunobi 1991; Omojuwa, 1991). Consequently, they spend much of their processing capacity reading individual words, thus impeding comprehension and academic achievement.

Reading is a means of communicating through print. It is said to be the most important and indispensable tool needed for learning, among other skills, involved in the learning process (Muodumogu, 1991; Brummit, 2012). In an age of information communication technology (ICT), it is imperative that students not only read but acquire appropriate reading skills essential for academic, economic, social and emotional survival (Muodumogu, 1991). This study defines reading comprehension as the ability of the reader to recognise, make meaning, and interpret printed texts.

Reading comprehension is essential for students' social, intellectual and emotional development. It is the researcher's contention that overall academic success or achievement by students is contingent on their abilities to comprehend printed materials. Inability by students to comprehend printed materials can result in poor self-esteem, poor academic performance, frustration and alienation with its many attendant problems. Similarly, given that human beings all over the world, adults and students alike, depend mainly on books and other materials, the importance of reading comprehension in students' survival after school cannot be overemphasized (Brummit, 2012). Aside from its importance within school for academic achievement, reading comprehension is essential for students' professional competence, recreation and the development of social skills. For students to effectively function as members of their families and the larger community in which they live the ability to read and comprehend printed materials is indispensable.

However, in spite of the important role that reading comprehension plays in students' overall development, the grim fact remains that a sizable percentage of the student population is deficient in this important intellectual activity. The difficulties

students have with comprehending or analyzing texts have been a great source of concern to teachers, researchers, educational psychologists, curriculum developers and parents for quite some time now. Sharlach (2008, p.20) aptly captures the problem of reading comprehension among students, thus: ‘Teachers often lament their students can read but do not comprehend. The most important thing about reading is comprehension. It is the reason we read.’

The yearly abysmal performances by students in the Junior Secondary School Certificate Examination (JSSCE), West African Senior Certificate Examination (WASCE), among other examinations, are all pointers to this grim fact (Benue State Examination Board, 2009; WAEC, 2010; Nnabugwu & Asomba, 2012). The WAEC 2012 results showed that over 4million students who wrote the Examinations had less than five credits which made them ineligible for University admission as against only about 1.5 million who had five credits and above and deemed legible for University admission (Nnabugwu & Asomba, 2012). More to the point, the 2012 November/December Senior Secondary School Examination results showed that only 33% of the 83,755 students who wrote the examinations had up to five credits including English Language to meet the basic requirement for entry into University (The Nation, 2013, Tuesday). Furthermore, the persistent complain by teachers that students read, but do not comprehend what they read, reinforce the argument that students have difficulties comprehending printed texts (Sharlach, 2008).

Reasons that may account for difficulties in reading comprehension and, by implication poor academic achievement, and how to mitigate this hugely disturbing trend have been a source of controversy among educational researchers (Amao, 2005;

Ekpunobi 1991; Omojuwa, 1991). Many researchers, prominent among them Muodomogu (2005) and Ekpunobi (1991) blame poor reading comprehension on the use of conventional or traditional method of instruction. Further elucidation by Muodomogu (2005) showed that in many reading classes where the conventional method of instruction is dominant, huge discrepancy exist between what the teachers want students to learn and how they teach. She further observes that the conventional method of teaching reading comprehension tends to consist in a monologue from teacher to students and students' independent reading of classroom texts. The conventional method of instruction, which is dominant in our schools, assigns the teacher the role of controller of the learning environment where students are viewed merely as knowledge holes that need to be filled with knowledge which the teacher alone transmits. The strategy is characterised chiefly by competition; students' pronunciation and mastery of vocabularies through drill and practice followed by individual reading (Johnson & Johnson, 1999). The conventional method of instruction is viewed in this study as that form of teacher-centred learning characterised by competition, drill, and practice.

Many educational researchers, ostensibly irked by the trend of poor reading comprehension among students apparently occasioned by the failure of the conventional method of instruction, have carried out studies on how the cooperative learning strategy could be used to make students feel good about school, enhance their level of academic achievement and raise their self concept. The Massachusetts Advocacy Centre (1990) indicates that co-operative learning may have important benefits for students' academic achievement and the development of self concept. In

today's information/service economy, individuals need to know how to work with others in teams to solve problems or to accomplish tasks yet most classroom activities involve students working independently. Co-operative learning builds upon the instincts of children and replacing independent seat work with activities for small groups (Crosby & Owens, 1993).

Co-operative learning can be defined as an instructional strategy where students are put into small groups so they can work together for their own and each other's learning. Co-operative learning is not the same as collaborative learning, yet both strategies are known to possess certain similarities. In the area of similarity, the two strategies assign students to groups for learning to take place. Crucially, the two systems place emphasis on group skills, such as positive interdependence, group processing, and equal participation, among others, in order for learning to take place. Aside from the similarities that the two strategies are known to possess, a number of salient differences can be said to exist between them. Rockwood (1995a) clearly distinguishes the difference between the two strategies by stating that cooperative learning is the methodology of choice for foundational knowledge or traditional knowledge, while collaborative learning is connected to the social constructionist's view that knowledge is a social construct. He further opined that, in cooperative learning the teacher is the centre of authority, while the teacher, in a collaborative learning, abdicates his or her authority to the collaborative groups. Cooperative learning is characterised by group tasks with closed- ended answers, while collaborative groups are on the other hand characterised by more open-ended and complex task (Rockwood, 1995b). Similarly, while cooperative learning groups are

usually smaller with members having individual scores or answers; collaborative learning groups are larger with members having one score or answer for the group.

In cooperative learning, all members of a group are expected to work together until they all understand and complete a given task. By contrast to the conventional method of instruction, students being exposed to the cooperative learning strategy, study pronunciation of vocabularies and their meanings as used in the text and thereafter engage in group reading on the basis of discussion, negotiation and clarification to ensure meaning construction. Cooperative learning is dependent on the individual being accountable to the group; and the group being accountable to the individual. Co-operative efforts result in participants striving for mutual benefits so that all group members gain from each other's effort. Co- operative learning has certain features/components which marks it out from other forms of conventional methods of instruction that may appear to look like it. The five components are identified by various research studies (Kagan, 1994; Johnson, Johnson & Holubec, 1993) as follows:

1. Positive interdependence
2. Equal participation
3. Individual and group accountability
4. Simultaneous interaction
5. Group processing

The success of co-operative learning strategy is contingent on a routinely conscious effort by teachers to systematically structure those basic elements into group learning situations for the long-term success of the strategy.

For co-operative learning to work effectively, it must not be seen as merely putting students into various groups. Criticisms of co-operative learning emanate from its misuse by educators who wrongly assume that the strategy means putting groups under the charge of some high achieving students. Co-operative learning works when pupils or students take different work as facilitators, reporters, and recorders, among other roles. In other words, the success of the group depends on the successful work of every individual.

In a study by Johnson and Johnson (1989) the benefits of the co-operative learning strategy were found to outweigh the conventional method of instruction which emphasize competitive and individualistic efforts. The research identifies the benefits of the strategy to include higher achievement and greater productivity by students; more caring, supportive and committed relationships; and greater psychological health, social competence, and most importantly, a rise in students' self concept. This study defines cooperative learning simply as a highly organised form of group learning where each individual member of the group is helped to learn through others' effort while the individual learner is motivated to increase the learning of other members. Of the various forms or types of the cooperative learning strategy, this study adopts the Student Teams Achievement Divisions (STAD) which allows for heterogeneous grouping of students by ability, gender and ethnicity, and also allows for small team sizes (Slavin, 1988). It is the researcher's considered

opinion that small team sizes may make for easier inculcation of the five components of the cooperative learning strategy and by implication make for better and more fruitful student interaction.

Another concern of this study was the effect of the cooperative learning strategy on students' self concept. Many scholars have defined self concept differently. As pioneer researcher on the self concept, Rogers (1959) had identified the structure of the personality in terms of one construct, which he identified simply as self. This is generally referred today as the self concept. In spite of the availability of huge volumes of work in this field, it is difficult to find a unanimously accepted definition of the self concept. Self is defined as an organised collection of beliefs about the self. Not only do beliefs about the self influence current behaviour, they also influence future behaviour. Self- concept is defined as the perception that each one has about himself, formed from experiences and relationships within the environment, where significant people play an important role (Shavelson, Huber & Stanton, 1976). Weyton and Lloyd (2003) see self-concept as a conviction of beliefs about one's nature, unique qualities and typical behaviour. Shek, Lee and Chan (1998) defined the self concept as how one understands himself as an individual who has a set of unique or special characteristics. Huit (2009) defined self concept as the totality of a complex, organized, and dynamic system of learned beliefs, attitudes and opinions that each person holds to be true about his or her personal existence.

Although the scholars cited above have all defined self concept differently, it is clear from all the definitions that the self concept each individual has about himself or herself may be playing significant role in the success or achievements individuals

attain in life. The beliefs and opinions students hold of themselves are based on their sensitivity and self awareness about their strengths and weakness. Some researchers posit that students' academic achievement predict their self concept (Calsyn & Kenny, 1977); others, in contradistinction, aver that self concept leads to academic achievement (Marsh, 1990). Notwithstanding the contrasting views, it is the researcher's contention that the two views not only underscore the importance of the self concept but underlines a reciprocity that may well exist between self concept and students' academic achievement. As a variable of the study, the importance of self concept stems from the fact not only do beliefs about the self influence current behaviour, they also influence future behaviour. Consequently, the self concept students have of themselves is capable of influencing their current and future behaviour. This clearly underscores the role of self concept in social, emotional and academic development of students. Strage and Bradt (1999) identified two major types of self concept. They identified them as positive self concept and negative self concept. They averred that individuals with positive self concept are usually confident, objective and have good interest, while individuals with negative self concept have low self confidence, passive, dreary and suffer from inferiority complex.

The influence of location, used in this study as a moderating variable, in determining the outcome of the cooperative learning strategy formed part of the study's concern. The study was carried out in Education Zone B of Benue state (North – west) with many residents in living in both urban and rural areas. Consequently, there are many schools in both urban and rural areas. Put in form of a

question in relation to the study: what are the differences in the self concept and reading comprehension achievement of urban and rural students exposed to the cooperative learning approach of STAD, and urban and rural students taught using the conventional method of instruction? School location has been shown to be a potent factor in students' academic achievement, and consequently accounting for variations in achievement (Murphy, 2003; Brown & Swanson, 2001). It has also been posited by some researchers that the vast majority of low achievers are mostly found in public rural schools (Swanson, 2001).

It is a fact, however, that many public rural and urban schools suffer from similar problems of poor facilities, ineffective instructional strategies, dilapidating structures, poor ventilation, and large class sizes, among other adverse conditions. However, some scholars posit that, given the fact many rural schools have low student/teacher ratio, rural students tend to develop stronger ties with themselves and the community. As a consequence, students in rural areas cultivate the habit of working together and benefitting from group discussions (Brown & Swanson, 2001). A lot more studies still need to be carried out to verify this finding. Regardless of location, many studies have continued to posit that the cooperative learning strategy may be effective in helping students feel good about school, improve academic performance and raise students' self concept. However, the conventional teaching strategy, regardless of location, has remained the dominant and most widely used by teachers in our schools.

Based on available studies, it appears still unproven what effect the cooperative learning strategy has on students' self concept and achievement in

reading comprehension. Consequently, this study sought to uncover the effect of the co-operative learning strategy on students' self concept and achievement in reading comprehension. The study also sought to investigate the effect of the cooperative learning strategy on students' self and achievement in reading comprehension as a result of location.

Statement of the Problem

It is evident that a vast majority of students have difficulties comprehending what they read. This disturbing phenomenon is not without its many negative ramifications especially given the fact that reading comprehension correlates academic achievement and feeling of fulfilment. However, the frequent use of the conventional method of instruction, regardless of modest achievements made, has not reasonably been able to mitigate the problem of poor reading comprehension. The conventional method of instruction is largely teacher-centred and as a consequence places emphasis on competition, repetition and drill, and is characterised by individual reading leaving no room for discussion, negotiation and the clarification of ideas, all essential ingredients for critical thinking. The poor performance by both urban and rural students in our various public examinations is both an indictment of the conventional method of instruction and an excellent pointer to the fact that students have difficulties with reading comprehension. For example, the WAEC 2012 results recently released showed that over 4million students who wrote the WAEC Examinations had less than five credits making them ineligible for University admission as against only about 1.5 million who had five credits and above, and deemed legible for University admission (Nnabugwu & Asomba, 2012). More to the

point, the 2012 November/December Senior Secondary School Examinations results showed that only 33% of 83,755 students who wrote the exams had five credits including English Language to meet a basic requirement for entry into University (The Nation, 2013, Tuesday). This dismal performance is further underscored by the persistent complain by teachers that students read, but do not comprehend what they read (Sharlach, 2008). Additionally, the inability of students to comprehend printed texts has its many other attendant problems which include the feeling of social exclusion, frustration, poor academic performance and low self concept.

Although a number of studies on the cooperative learning strategy continue to attest to the effectiveness of the strategy on students' achievement, a gap or a lacuna can still be said to exist on the effect of correct and regular use of the cooperative learning strategy on the self concept and achievement in reading comprehension of students in both urban and rural schools.

Purpose of the Study

Generally, the study sought to investigate the effect of cooperative learning on students' self concept and achievement in reading comprehension

Specifically, the study has the following purposes:

1. To determine the reading comprehension achievement mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction.
2. To determine the self concept of students exposed to cooperative learning and those taught using the conventional method of instruction

3. To ascertain the effect of school location on the reading comprehension achievement mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction
4. To ascertain the effect of school location on self concept of students exposed to cooperative learning and those taught using the conventional method of instruction.
5. To determine the interaction effect of treatment and school location on the reading comprehension achievement scores of students.
6. To determine the interaction effect of treatment and school location on students' self concept.

Significance of the Study

The findings of the study hold both theoretical and practical value to various stakeholders in education. Among those who would find the outcome of the study of profound practical value are teachers, students, textbook writers and school proprietors. Others include, guidance counsellors, Boards and Commissions of Education, ministries of education and industries.

On the theoretical level, the study may further confirm some of the existing theories earlier propounded by Jerome Bruner, Albert Bandura and Lev Vygotsky that students learn through interaction and cooperative efforts with others in the environment. Similarly, the study would further confirm the humanistic personality theory of Carl Rogers that the self concept is shaped largely through interaction and experiences with others in the environment. On the practical value of the study, teachers and school proprietors would find the outcome of the study useful by way of

using cooperative learning efforts to improve the quality of teaching in order to help students learn various school subjects faster and more effectively. The findings of the study would also help equip teachers with various techniques of the cooperative learning strategy to help students with learning difficulties- a major challenge faced by teachers occasioned by the continuous use of the conventional method of instruction in our schools. Through the cooperative learning strategy, guidance counsellors and teachers would instil in students the virtue of cooperation, and by implication develop students' positive self concept through cooperative learning which is an essential ingredient for team work that is vital in the work place and for survival in a globalised world/economy.

The effect of location would be of profound significance since the study has demonstrated that location is not a significant factor in achievement in reading comprehension. This suggests that both urban and rural students can make progress in reading comprehension and as a consequence develop positive self concept. The slight variations in performance among students as a result of location also highlight the need for improvement in facilities and infrastructure in public schools in general and rural schools in particular.

For school proprietors, Ministries of Education, Boards and Commissions of Education the outcome of the study would provide an opportunity for conferences and seminars for teachers in both urban and rural schools with a view to sensitizing them to the technique as well as deepening teachers' knowledge of the strategy on correct and regular use of the strategy. Textbook writers in various subjects would

also find the study useful by developing students' activities that place emphasis on cooperative efforts among students to enhance learning.

More importantly, the study would be of profound value to students. With the imbibing of cooperation as a virtue by students through regular and appropriate use of the cooperative learning strategy, students would develop more effective means of improving their learning as well as develop better interpersonal relationships. This would go a long way in minimizing school based interpersonal social problems such as bullying among students within, and outside school.

Scope of the Study

The study was conducted among Junior Secondary Schools II students in the North- west Education Zone (Zone B) of Benue State, situated in the North Central geo-political region of Nigeria. The subjects covered are Integrated Science, Religion, and Social Studies, while the texts covered are social group, water pollution, group behaviour, and marriage. Similarly, of the various types of the cooperative learning strategy, the study adopted the Student Teams Achievement Divisions (STAD). The justification for the use of STAD was based on the fact that the strategy allowed for heterogeneous grouping of students into teams and allows for smaller team sizes to make for inclusive participation by members, thus, reducing the free rider effect.

Research Questions

The following research questions were raised to guide the study:

1. What are the differences in the reading comprehension achievement mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction?
2. What are the differences in the self concept mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction?
3. What is the effect of school location on the reading comprehension achievement mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction?
4. What is the effect of school location on the self concept mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction?
5. What is the interaction effect of treatment and school location on the reading comprehension achievement mean scores of students?
6. What is the interaction effect of treatment and school location on the self concept mean scores of students?

Research Hypotheses

The following hypotheses were formulated for this study; and tested at 0.05 degree of significance:

1. The reading comprehension achievement mean scores of students exposed to co-operative learning will not significantly differ from those taught using conventional method of instruction.
2. The self concept mean scores of students exposed to co-operative learning will not significantly differ from those taught using the conventional method of instruction.
3. There is no significant difference in the reading comprehension achievement mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction as a result of school location.
4. There is no significant difference in the self concept mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction as a result of school location.
5. There is no significant interaction effect of treatment and school location on the reading comprehension achievement mean scores of students.
6. There is no significant interaction effect of treatment and school location on the self concept mean scores of students.

CHAPTER TWO

REVIEW OF LITERATURE

The chapter reviewed relevant works of literature under the following headings:

A) **Conceptual Framework:**

Reading Comprehension

Self- Concept

Cooperative Learning

Relationship between Cooperative Learning, Self Concept and Reading Comprehension Achievement.

Theoretical Framework

- The Theory of Cognitive Development by Jerome Brunner
- The Social Cognitive Theory (SCT) by Albert Bandura (1925-).
- Theory of Cognitive Development by Lev Vygotsky (1896- 1934).
- The Humanistic Personality Theory of Carl Rogers (1902- 1987).

B) **Empirical Studies**

Effect of Cooperative Learning on Academic Achievement

Effect of Cooperative Learning on Students' Academic Achievement
as a Result of Location

Effect of Cooperative Learning on Self- Concept

C) **Summary of Review of Literature**

CONCEPTUAL FRAMEWORK

Reading Comprehension

Reading is an essential intellectual activity that involves decoding, perception and cognition. To speak of reading and the reading process is of course, to speak of thinking and the thinking process when the human brain, via the eyes, encounters print, it faces the task of meaning extraction. Although reading and reading comprehension are used interchangeably, the two activities are different but mutually complementary. The ability to comprehend information and printed text is why we read. Scharlach (2008) vividly captures this similarity as well as highlight the problem students have with the comprehension of printed texts thus:

Teachers often lament that their students can read but they do not understand. The most important thing about reading is comprehension. It is the reason we read. However, many teachers express concern about their ability to effectively teach all of their students to become strategic metacognitive readers. Schools today are spending enormous amounts of time and money preparing students for high-stakes tests even though such a narrow focus on test preparation does not translate into real learning (p.20).

It is no gain saying that the inability to analyze and interpret texts is a huge problem among the vast majority of our students. The difficulties students have with the comprehension of printed texts have accounted for high rates of school drop outs and underachievement in school work This is particularly true for English- language learners – ELLs (non- native English speakers or students to whom English is a

second language). This disturbing state of affairs as noted earlier has continued to pose an enormous challenge to academic achievement in our schools. Ogle and Correa-Kovtun (2010) aptly capture the problem as follows:

... teachers are concerned about how best to help their increasing numbers of English language learners (ELLs) succeed, particularly in the challenging content areas of social studies and science. Students often struggle with content- specific vocabulary and the need to read and learn from informational textbooks, where the academic vocabulary is often unfamiliar . . . (p. 532).

Reading comprehension is defined as the level of understanding of writing; it is the ability to make sense or meaning of a text (Reading Rockets, 2010; Dooley, 2010). However, as already noted earlier a significant number of students spend their time on reading or processing printed works without a corresponding level of understanding. Various reasons have been adduced by researchers to explain why the level of comprehension of printed work is low among students. As students start reading challenging texts, especially in the content areas of Social Studies and the sciences, they encounter increasing complex works (Anderson & Freeboy, 1981). For most students, it is either they have a vague understanding of these words or do not recognize the words at all. As a result of this, students' level of comprehension may suffer. Far too many students are unable to make meaning of texts because they lack a firm grasp of the definition of key words used in a passage. It is evident that even with good teachers who deploy effective teaching methods; students with limited vocabularies may not be able to access the meaning of the text (Anderson & Freeboy,

1981, RAND Reading Study Group, 2002, Kieffer & Lesaux, 2007). Further studies, however, also show that students from low income schools have limited vocabulary than students from high- income schools. These studies further showed that this gap tends to increase with time (Chart & Risley, 1995; Molfese, Modglin, & Molfese, 2003; Organization for Economic Co- operation and Development, 2000). Several other scholars have also shown that vocabulary is an essential but often an overlooked component in a balanced literacy programme (Rupley, Logan, & Nichols, 1999; Cassidy & Cassidy, 2006).

That a reciprocal relationship exists between vocabulary and reading comprehension is no longer in doubt. To underscore this fact, Stanovich (1986) posits that as greater vocabulary leads to greater comprehension, better comprehension also leads to learning more vocabulary. The implication of this relationship is also obvious as it will enhance the teaching of reading and also improve students' academic achievement (Rupley, Logan & Nichols, 1999). A significant number of researchers have emphasized the importance of vocabulary in reading comprehension. But a consensus also appears to exist among these researchers that the literal meaning of a word is not enough; they emphasize the importance of knowing the relationship of such words to other words, their connotation in different contexts and their power of transformation into various other forms (Stahl, 1999).

Although instructors and researchers appear to agree on the importance of academic vocabulary; the same consensus cannot be said to exist among them on how such vocabulary can be learned. One group favours the adoption of wide-ranging free reading as the primary vehicle through which words can be learned. This

group contends that there is link between students' volume of reading and their vocabulary knowledge (Anderson & Nagy, 1992; Cunningham & Stanovich, 1991).

Another essential but equally overlooked component that is important in reading comprehension is students' knowledge of morphology. The word morphology is made up of two meaningful parts: morph (meaning shape) and ology (meaning the study of). By its simple definition, therefore, morphology refers to the study of the structure of words, particularly the smallest units of meaning in words: morphemes. Kieffer and Lesaux (2007) posits that morphemes are generally one of the two: bound and unbound morphemes. Bound morphemes are prefixes and suffixes that cannot stand alone as words. They include geo, re and ity, among others. Unbound morphemes are more complex words that can stand alone such as popular and climax.

Similarly bound morphemes that are suffixes are one of the two types: inflection morphemes and derivational morphemes. Inflection morphemes are not suffixes such as -ed and -s- that change the tense or number of a word without changing its part of speech. Derivational morphemes, on the other hand, are suffixes such as -ity and -tion that change a word's part of speech.

Kieffer and Lesaux (2007) observed that the understanding of morphology is a veritable tool for students faced with the task of acquiring academic vocabulary. They observe that a large number of unfamiliar words that students encounter in printed work in English could be understandable if students knew the more common root word and could break the complex word down. The ability of students to process

these complex words is crucial to their understanding of these too often complex texts. Students are known to develop awareness of morphology throughout their childhood and into their adolescence. A number of studies have shown that understanding of morphology is related to reading comprehension (Carlisle, 2000; Freyd & Baron, 1982; Nagy, Berningen & Abbot, 2006).

In a study, Kieffer and Lesaux (2007) found out that a relationship exists between reading comprehension and morphology and that the relationship becomes more important as students grew older. The study found that morphology was a better predictor of reading comprehension than students' vocabulary level. This study further revealed that morphology was important in the reading comprehension of native –English speakers in urban setting as it was for English Language Learners. Another equally illuminating finding of this study was that a reciprocal relationship existed between vocabulary and morphology. In other words understanding morphology may help students broaden their vocabulary, and vocabulary growth may improve students' understanding of morphology

From the various works so far reviewed, it is evident that there is a strong relationship between level of vocabulary and morphology. The review has shown that the relationship between the two is reciprocal. Similarly, the knowledge of the two is said to play an important role in students' ability to make meaning or sense of text.

Self Concept

As noted earlier in the discourse, self concept does not have a universally accepted definition. Huit (2009) defines the self as the conscious reflection of one's

own being or identity, as an object that is separate from others or from the environment. The importance of self concept stems majorly from its notable contribution to personality formation. Self concept influences how one feels, how he or she thinks, learns, values himself or herself. The self concept influences how individuals relate to others, and ultimately, how they behave (Clark, Clemes & Bean, 2000; Clemes & Bean, 1996). The self is usually thought of in a variety of ways but the most widely used are self concept and self esteem. The self concept is simply the mental picture that one has about oneself. Sanchez and Rhoda (2010) define self concept as follows:

the set of perceptions or reference points that the subject has about himself; the set of characteristics, attributes, qualities and deficiencies, capacities and limits, values and relationships that the subject knows to be descriptive of himself and which he perceives as data concerning his identity(p.97).

Self concept is also defined as the evaluation of one's worth in positive or negative terms (Katz, 2000; Marshall, 2001). Such an evaluation can tell individuals how competent, worthwhile, and effective or the contrary, whether they see themselves as incapable, unlikeable, unattractive or weak. From a purely theoretical model, Shavelson, Hubner and Stanton (1976) define the self concept as the perception that each one has about himself, formed from experiences and relationships with the environment, where significant people play an important role. Self esteem, on the other hand, is viewed as an aspect of the self which generally refers to how we feel about or how we value ourselves. The difference between self concept and self

esteem appears to be imprecise such that many researchers use them interchangeably. Franken (1994, p.439) clearly captures the relationship between the two when he states that ‘people who have good self esteem have a clearly differentiated concept... When people know themselves they can maximize outcomes because they know what they can do and cannot do.’ On her part, Berk (1991) opines that the difference between the self concept and self esteem is so imprecise that many researchers do not make a distinction between them. She further avers that the majority of studies on self concept are really studies on self esteem.

Self concept is sometimes erroneously thought as a single entity. On the contrary, volumes of studies have shown quite clearly that self concept is a multifaceted structure or entity (Baumeister, 1999; Campbell, Assanand, & Di Paula, 2000; Huitt, 2007). As a component of the human personality, the self- concept has its unique nature and peculiarity. Shavelson, Hubner and Staton (1976) averred that the self concept is a compendium of seven characteristics or fundamental aspects. They identified them as follows:

- 1) Self – concept constitutes a psychological dimension
- 2) Self concept is multidimensional
- 3) Self concept is hierarchical (a general self concept and specific self concept)
- 4) Self concept is stable (but we go lower on the hierarchy).
- 5) Self concept becomes more specific and susceptible to change
- 6) The different facets of self concept become more differentiated among themselves with age and experience

- 7) Self concept includes both descriptive as well as evaluative aspects
- 8) Self can be differentiated from other constructs which it is related to such as academic performance

Consequently, as observed by Markus and Wurf (1987), the self concept can be seen as an organised collection of beliefs (also called self – schemas) about the self. Campbell et al (2000) averred that these self – schemas are derived from one’s past experiences and are concerned with the individual’s personality traits, abilities, physical features, values, goals, and social roles. Huitt (2009) posited that the self concept has several components which he identified as physical, academic, social and transpersonal. The physical aspect of self concept refers to those aspects that are concrete. They include such physical attributes such as sex, height, weight, and sartorial taste, among other physical attributes. One’s academic self concept can be further subdivided into two: general academic concept and specific content – related self concepts. General academic self concept refers to how well one does in school while specific related self- concepts refers to how good one is at English, Mathematics, Painting, Physics, among other specific academic disciplines (Huitt, 2009).

Generally, people are thought to have beliefs or self- schemas only on those dimensions that they find important, including both strengths and weaknesses (Weiten & Lloyd, 2003). Each of the self schemas is also thought to have its relatively distinct thoughts and feelings. For example, a student may have enough information concerning his social skills and feel capable about them but may have limited or inadequate information and less confidence about his physical skills.

Current studies also suggest that only a portion of the total self concept operates at a time. Markus and Wurf (1987) identified the self concept that is currently working as working self concept.

Similarly, the self schemas are also thought to have a dynamic quality and play a major role in processing self – relevant information. When a particular belief or self- schema is at work, its attendant thoughts and feelings strongly influence the way individuals will process information about that aspect of the self (Fiske & Taylor, 1999). For example, a student in class will be influenced in that setting by the beliefs and emotions associated with his intellectual self schemas. On the other hand, the same student at a party will be influenced by his social self- schemas and the other thoughts and feelings related to it. The self concept of children is shaped by some factors which include one's observation, feedback from others and cultural values, among others.

One's own observation: Festinger (1954) proposed the theory of social comparison to explain the fact that individuals engage in comparing themselves with others in order to assess their true abilities and opinions. Individuals engage in various forms of comparison in order to determine how attractive they are, how intelligent they are and how sociable they are, among other others. A study carried out by Buunk, Collins, Taylor, Vanyperen and Dakof (1990) showed that aside from individuals accurately assessing their abilities through social comparison, it also helps individuals to maintain their self image as well as improve their skills. Wayne and Lloyd (2003) identified those set of individuals whom students will always compare themselves with as the reference group. A reference group for a student who

has written a Reading Comprehension test will be all the students who have written the said test. However, for a student who has performed poorly in a Mathematics test and needs a bolstering in his self concept, such a student will normally compare himself or herself with those perceived to be worse off than themselves. Individuals' observations about their abilities are not always objective. Some individuals may overrate themselves in some aspects while underrating themselves in other aspects; although the general tendency is to distort reality in a positive direction. For example, a student may overrate his physical attractiveness while underrating his emotional and intellectual ability (Taylor & Brown, 1994).

Feedback from others: The kind of feedback we get from other people about our behaviour goes a long way in shaping our self concept. Children's self concept is largely at an age by the feedback they get from parents and other family members, but as they get older, the number of people whose views can influence their self concept increases (Harter, 1990). A significant number of studies have demonstrated the strong relationship between parents view of their children and their self concept (Berne & Savary, 1993; Burhams & Dweck, 1995). Harter (1990) has shown that aside from parents' feedback, the feedback from teachers, coaches, class prefects and others could be a significant source of feedback. Similarly, during the period of adolescent, the peer group becomes a strong source of feedback (Harter, 1990).

Cultural values: It is an obvious fact that the society in which one is reared plays a vital role in determining our unique personality and behaviour. There are certain societies that emphasize individuality and competitive spirit while others, on

the contrary, put high premium on communal living and co- operation. Cross-cultural studies suggest that different cultures shape different conception of the self (Cross & Markus, 1999). Wayne and Lloyd (2003) opine that individuals reared in individualistic societies usually have an independent view of the self. They opine that such individuals perceive themselves as unique, self contained and distinct. In contrast, individuals reared in societies that place premium on collectivist values typically have an interdependent view of the self.

A healthy self concept is vital to all areas of a child's development (Essa, 2007). As a matter of fact, a number of theorists (Bandura, 1986; Eccles et al, 1983; Markus, Cross and Wurf, 1990) posit that students ability- related conceptions and ability-related beliefs mediate their achievement- related behaviours such as choice, persistence and actual performance. By contrast, other scholars contend that students' academic achievement predict their self concept (Calsyn & Kenny). It is the researcher's contention that the two contrasting views only reinforce the importance of the self concept. But more importantly, the two views appear to suggest that a reciprocal relationship exist between academic achievement and self concept. In other words, academic achievement may predict self concept and vice versa.

The review of self concept has clearly shown that students' self concept are formed from experiences and relationships with others in the environment. Within the school environment, this could include peers and teachers, and the learning process. Given that students' observation, feedback from others and cultural values may influence the self concept, a well structured cooperative learning with emphasis on social skills such as face to face interaction, individual and group personality,

interdependence, individual and group skills, and group processing may help students develop positive self concept. With the development of positive self concept through cooperative learning efforts, as against the conventional method of instruction, students may be positively influenced in terms of how they feel, learn, think, value themselves, and relate to others (Clemes & Bean, 1996).

Cooperative Learning

The co-operative learning strategy is gradually emerging as about the most researched teaching strategy. The problem, however, with the strategy has continued to be either its non usage or infrequent usage by teachers. The few schools and teachers, who use it all, usually do not use it correctly mainly because many of them do not have a proper understanding of the strategy. For example it is obvious that many teachers and schools have continued to assume that co-operative learning is the same as group learning. Although co-operative involves putting students into small groups, it is not every group of students studying together that can be described as engaging in co- operative learning. While grouping learning is characterised by the lack of interdependence, lack of social skills, lack of teacher monitoring of students' behaviour and the overly dependence on a few students who do all the work, the cooperative learning strategy, by contrast emphasizes interdependence, individual accountability, social skills and teacher monitoring of students' behaviour, among others (Ellis & Whalen, 1990).

By its simple definition, cooperation can be defined as a group of individuals working together to attain a common goal. Cooperation involves joint cooperation or action and has social, economic and even biological interpretation. From a social

perspective, the term cooperation can be defined as an activity shared for mutual benefits. Economically, the term could also be defined as a joint effort of individuals for the purposes of production, purchase and distribution while from the biological angle cooperation is seen as the conscious or unconscious behaviour of organisms living together for survival (Iqbal, 2011). Although, it is fairly recently that researchers have dedicated much time and energy to carrying out systematic and wide- ranging study on cooperative learning, the strategy can be said to have ancient roots in many societies. There are many definitions of cooperative learning. Roger, Olsen and Kagan (1992) define co- operative learning as follows:

Co- operative learning is a group learning activity organised in such a way that learning is based on the socially structured change of information between learners in a group in which each learner is held accountable for his or her own learning and is motivated to increase the learning of others (p.8).

Similarly, Johnson and Johnson (1998) define cooperative learning as the instructional use of small groups so that students work together to maximize their own and each other's learning. They differentiated cooperative learning from competitive and individualistic learning by stating that while the former seeks and emphasizes outcomes that are beneficial to all, the latter emphasizes on students working against each other for grades. On his part, Parker (1994) defined cooperative learning as classroom environment where students interact with one another in small groups while working together on academic tasks to attain the common goal.

Cooperative learning is also defined as an instructional strategy where small groups of students work together to solve a problem, complete a task, or accomplish a common goal (Artz & Newman, 1990).

In cooperative learning, each member of the group is seen to be responsible not only for learning what is taught but also for helping other members of the group to learn. According to Cooperative learning (2010), the strategy basically strives for members' mutual benefit in the following ways:

- 1) gain from each other's efforts (Your success benefits me and my success benefits you)
- 2) recognize that all group members share a common fate (We all sink or swim together here)
- 3) know that one's performance is mutually caused by oneself and one's team members (We cannot do it without you)
- 4) feel proud and jointly celebrate when a group member is recognized for achievement (We all congratulate you on your accomplishment)

But more importantly, Cooperative learning (2010) identifies the objectives of the learning strategy to include promoting students' learning and academic achievement, increasing students' retention, enhancing students' satisfaction with their learning experience and helping students' to develop skills in oral communication. Others include developing students' social skills, promoting students' self- esteem and helping to promote positive race relations. In concert,

Sadker and Sadker (1997) identified the objectives of the cooperative learning strategy as follows:

- 1) Students taught with this structure make higher achievement gains; this is true especially for mathematics in elementary grades.
- 2) Students who participate in cooperative learning have higher levels of self esteem and greater motivation to learn.
- 3) Students have a greater sense that classmates have positive regard for one another.
- 4) A particularly important finding is that there is greater acceptance of students from different racial and ethnic backgrounds when a cooperative learning strategy is in the classroom.

The cooperative learning strategy is known for its unique and elaborate approach to classroom instruction. As noted in the preceding section, the cooperative learning strategy is different from group learning or merely putting students into groups to learn. Similarly, the cooperative learning strategy can also be differentiated from competitive and individualistic learning that is commonly used in our schools today. Johnson and Johnson (1999) differentiated the cooperative learning strategy from the competitive and individualistic learning strategy as follows:

Goals: Students or class members are assigned into small groups, usually heterogeneously, and instructed to cooperatively learn the assigned material as well as ensure that all members do likewise.

Levels of cooperation: Cooperation may be extended to the class (by ensuring that everyone in the class has learned the assigned material) and the school (by ensuring that all students in the school are progressing academically) levels.

Interaction patterns: Interaction pattern: Students promote each others success. Students discuss material with each other, explain how to complete the assignment, listen to each other's explanations, encourage each other to work hard, and provide academic help and assistance. This interaction patterns exist between as well as within groups.

Evaluation of outcomes: A criteria- referenced assessment and evaluation system is used. The focus is usually on the learning and academic progress of the individual student but may also include the group as a whole, the class, and the school.

Some studies have shown that for cooperative learning to be successful certain conditions or elements are required. The conditions are believed to improve the quality of interactions as well as improve students' academic achievement. It is important to realize that not all groups cooperate. Schools and educators must make deliberate and conscious efforts to ensure that students benefit optimally from cooperative learning strategies. This is only possible if educators master the components of cooperative learning which place emphasis on social skills. These components are positive interdependence; equal participation, and individual and group accountability. Others include simultaneous interaction and group processing. Mastering of these component or elements of cooperative learning will allow

teachers to structure lessons, curricular and courses cooperatively. Secondly, it will also allow educators to tailor cooperative lessons to meet the unique instructional circumstances and needs of the curricular, subject areas, and students. Thirdly, it enables teachers to diagnose some problems students may have in working together and intervene to increase the effectiveness of the student learning groups (Cooperative learning, 2010). From available research works by experts in the field (Kagan, 1994; Johnson & Johnson, 1984; Cooperative learning, 2010; Johnson & Johnson, 1990; Johnson, Johnson & Holubec, 1993) certain components or elements were identified as positive interdependence (sink or swim together), equal participation (face- to – face interaction), individual and group interaction (no hitchhiking! no social loafing), simultaneous interaction/ interpersonal and social group, and group processing. Kagan (1994) summarised the first four elements in an acronym as PIES; Johnson, Johnson and Holubec (1993) added one element to the list known as group processing.

Positive interdependence: Positive interdependence is said to exist in group that adopts the cooperative learning strategy when the gain of one student is seen as gain for all other students. According to Cooperative learning (2010) when the strategy is correctly structured it emphasizes, first, that each group members efforts are required and are indispensable for group success, and second, that each group member has a unique contribution to make to the joint effort because of his or her resources and / or role and task responsibilities. Positive interdependence is the heart of cooperative learning; without positive interdependence, there will be no cooperative learning. Kagan (1994, p4) aptly summed it up when he stated that, ‘the

success of every team member depends upon the success of other people' and ' if one fails, they all do'

The discipline of using cooperative groups begins with structuring positive interdependence. Group members begin to know that they 'sink or swim together.' It is positive interdependence that requires group members to roll up their sleeves and work together to accomplish something beyond individual success.

Equal participation: Equal participation suggests that no student will be left out of the learning process; it also means that no student will be allowed to loaf or hitchhike. Similarly no student will be allowed to dominate the learning process, either socially or academically. For equal participation to be successful, Kagan (1994) proposed two strategies. First, is turn allocation, which means students will be allowed to take turns in speaking and to make contributions when it is their turn to speak. Second, is division of labour, which means tasks are broken down and shared so that each student or member of the group is assigned a responsibility. Cooperative learning includes orally explaining how to solve problems, teaching one's knowledge to others, checking for understanding, discussing concepts being learned, and connecting present with past learning.

Individual and Group accountability: For cooperative learning to be successful, both individual and group accountability must be carefully assessed. The group must be accountable for achieving its goals and each member must be accountable for contributing his or her share of the work. Group accountability is said to exist when the overall performance of the group is assessed and the result given

back to all students or group members to compare against a standard of performance. Individual accountability, on the other hand, is said to exist when the performance of each member of the group is assessed, the results given back to the individual and the group to compare a standard of performance, and the member is held responsible by the group-mates for contributing his or her fair share in the group's success. For cooperative learning to work more effectively, teachers must ensure that groups are kept small; the smaller the size of the group the greater the individual accountability. In addition, greater results are achieved when one student in each group is assigned the role of a checker. The role of the checker is to ask other group members to explain the reasoning and rationale for group answers. Cooperative learning also affords students the opportunity to teach other students what they had learned to someone else.

Simultaneous Interaction: Cooperative learning (2010) observed that cooperative learning is inherently more complex than competitive or individualistic learning because students have to engage simultaneously in task work (learning academic subject matter) and teamwork (functioning effectively as a group). Group members need to do real work together. Promotive interaction is said to exist when individuals encourage and facilitate each other's effort to complete task in order to attain group goals.

Promotive interaction among group members can be achieved through adopting three strategies. First, group members should be taught to schedule time for the group to meet. The purpose is to make out time for groups to mature and develop. Second, group members are helped to imbibe the virtue of positive interdependence is

essential for attainment of group goals. Third, members are encouraged to engage in promotive interaction. To ensure success, groups should be monitored and instances of members' promotive interaction should be celebrated.

Group processing: This essential component of cooperative learning deals basically with how the group had worked and to assess outcomes. Group processing may entail reflecting on a group session to describe what members' actions were helpful and unhelpful and make decisions about what actions to continue or change. Group processing aims at clarifying and improving the effectiveness of the members in contributing to the collaborative efforts necessary to achieve the group's goals.

Johnson and Johnson (1999) identified five steps in structuring group process. They are assessing the quality of interaction among group members as they engage in cooperative learning, examining the process by which each group does its work and to give each learning group a feedback, and setting goals as well as how to improve group effectiveness. Others include processing how effectively the whole class is functioning, and conducting small group and whole class celebration.

As noted earlier in the discourse, the cooperative learning strategy is an effective but complex strategy of teaching. Many researchers are fashioning newer methods or structures of applying the strategy. For example, Dr. Spencer Kagan and his associates at the Kagan Professional Development were known to have developed more than 100 structures. Slavin (1995) has reviewed many of these strategies. He divides the various structures in the following ways:

Student Team Learning Methods: More than half of all studies of practical cooperative learning methods involve this method. This particular structure emphasizes the idea that students work together to learn and is responsible for their team mates learning as well as theirs. Aside from the idea of cooperative work, Students Team Learning Methods emphasize the use of team goals and team success, which are achievable only if members clearly understood the objectives being taught. For Student Team Learning to be successful, three concepts are essential. They are team rewards, individual accountability and equal opportunities for success.

By team rewards here is meant that teams do compete to earn a reward; all (or none) of the teams may achieve the criterion in a given week. Individual accountability on the other hand means that the team's success depends on the individual effort and learning of all team members. Furthermore, accountability emphasizes on helping one another learn and making sure that everyone on team is ready for a quiz or any other assessment. Equal opportunity means that students contribute to their teams by improving on their past performance. This is to ensure that no member of the group is left behind, regardless of the fact whether they are high, average and low achievers. Members are not only challenged to do their best but made to feel their contributions are valued.

Student Teams Achievement Divisions (STAD): This strategy involves competition among groups. Students are grouped heterogeneously by ability, gender and ethnicity where they learn materials in team and take quizzes as individuals. Individual scores contribute to group scores. Slavin (1999) considers this structure

appropriate for a variety of subjects such as science, mathematics, social studies, among others, if the focus is on material with one right answers.

Teams- Games- Tournaments (TGT): This strategy was developed by Slavin and his colleagues. Like STAD, this strategy involves the same use of heterogeneous groups, instructional format, and worksheets for the learning of information. For the tournament, students from different teams are placed in groups of three students of comparable ability. In TGT, the academic game replaces quizzes. Although study teams stay together for six weeks, tournament table composition changes weekly.

Slavin suggest that TGT can be used two to three days a week in science to learn basic concepts. He further suggests that it is possible to alternate TGT with STAD on a weekly basis. Students appear to enjoy the challenge of the tournaments and, because they compete with others of comparable ability, the competition is fair.

Jigsaw 11: This modification was developed by Slavin. In it, competition occurs between learning teams for specific group rewards, which are based on individual performance. Points are earned for the team by each student improving his/her performance relative to his /her performance on previous quizzes (Knight & Bohlmeier, 1990). Also, all students read a common narrative and then each is assigned a topic which to become an expert. This version saves the teacher from having to prepare different sets of reading materials.

Circles of Learning: In Circles of Learning, students work in four- or five member heterogeneous groups on a group assignment sheet where a single product is produced and the group receives rewards together. This structure places emphasis on

team- building activities and regular discussions within groups about how they are working together (Johnson & Johnson, 1984).

Jigsaw: This interesting cooperative learning strategy was developed by Aronson, Blavey, Sikes, Stephan and Snapp (1975). This strategy has over the years attracted the attention of many scholars consequent upon which two additional versions of the strategy have been developed: Jigsaw 1 and Jigsaw 11. According to this strategy each student in a five-member cooperative group is given information that consist only a part of the lesson so that each student in the group has different information. Student with similar information are expected to leave to an ‘expert group’, in which all students with same information get together to cooperatively study the information and how best to teach it to their peers in the original group.

After the tasks are accomplished in the expert groups, students will now return to their original groups where they are expected to teach the information they were given to their original group. Scores are given on individual performance but no reward for achievement or for the use of the cooperative learning skills.

Jigsaw 111: This type of cooperative learning was developed by Kagan and is meant for use only in bilingual classrooms. All materials meant for use in the Jigsaw 111 method are bilingual. Cooperative learning groups using the method consist of one English speaker, one non- English speaker and one bilingual.

Group investigation: This method of cooperative learning gives students a greater control in terms of control and choice than do the other methods of the cooperative learning strategy. Common interest in a particular aspect of a general

topic is major a factor in the formation of cooperative learning groups. To make the strategy work, group members engage in appropriate decision making on how to carry out their work as well as divide the work among themselves. The various groups are expected to synthesize and summarize the work carried out and present their findings to the class accordingly. (Sharan & Sharan, 1990).

Complex Instruction: A focus of complex instruction is the building of respect for all the abilities students have. This cooperative learning strategy requires a wide variety of roles and skills and teachers point out unique abilities that students have that will be vital to the group success. Slavin (1995) avers that complex instruction is particularly useful in bilingual classes and heterogeneous classes containing language minority students.

Team Accelerated Instruction (TAI): In team accelerated instruction, four-member mixed ability learning teams work together to complete their material and homework. This method of cooperative learning strategy is specifically designed for the teaching of mathematics. In TAI, students enter an individualized sequence according to a placement test and then proceed at their own pace. Teammates check each other's work using answer sheet and help one another with the problems. Final unit tests are taken without teammate help and are scored by student monitors. As students are responsible for checking each other's work and managing the flow of materials, the teacher can spend most of the time presenting lessons to small groups of students drawn from various teams who are working at the same level in the mathematics sequence. This cooperative strategy has individual accountability, equal opportunity and motivational dynamics as the main features (Slavin, 1995).

Cooperative integrated Reading and Composition (CIRC): Stevens, Maddan, Slavin and Franish (1987) developed this elaborate cooperative learning strategy in which a wide range of student performance levels in one classroom is accommodated using both heterogeneous and homogenous within class grouping. In most CIRC activities, students follow a sequence of teacher instruction, team practice, team pre-assessments, and quiz. Team rewards and certificates are given to teams, based on the average performance of all team members on all reading and writing activities. Students' contributions to their teams are based on their quiz scores and independently written compositions, which ensure individual accountability.

Structured Dyadic Methods: Unlike other forms of cooperative learning where students are put into groups of about four members, the structured dyadic methods involves pairs of students teaching each other. This method involves students taking turns as teacher and learner to learn procedures or extract information from text. Pair tutoring is known to have been used over a longer periods in classrooms. In a similar method called Class Peer Tutoring, Greenwood, Delquadri and Hall (1989) observed that tutors would present problems to their tutees who would earn points if they respond correctly. If not, tutors would provide the answer and the tutees must write the answer correctly three times, or otherwise correct their error. For the method to work correctly, the tutees and tutor must switch role every ten minutes.

In spite of the numerous successes and advantages that cooperative learning strategy is credited with, it is worth noting to emphasize that the strategy is not

without some of its drawbacks. Slavin (1995) identified the following pitfalls related to cooperative learning:

Free Rider: The free rider effect is said to occur when some group of students do most of the work or learning while others go for the ride. Cooperative learning tasks such as producing a single report, single worksheet or single project, if not properly structured and handled by the teacher, can engender the free rider effect.

Diffusion of Responsibility: This occurs when students or members seen or believed to be less active or intelligent have their contributions or views ignored or brushed aside by other members of the group. Similarly, there may be no incentive for the more active members who take their time to explain group tasks to the less active members of the group.

Learning a part of task specialization: The application of cooperative learning strategies such as the Jigsaw, Group investigation and other related strategies would usually led to group members learning a deal of their own part of the task but not the other content of the task. However, the correct use of cooperative learning strategies as well as alternating the strategies help in the control of these pitfalls or drawbacks.

Regardless of type or form, generally, the cooperative learning strategy involves putting students into small groups to ensure individual and group success or achievement. This study adopted the Student Team- Achievement Divisions (STAD). The first and the most important feature of the Student Team- Achievement Divisions (STAD) is that teams are kept low (usually five students per group). With this arrangement, participation by all members is made more effective, hence the free

rider effect is properly checked. Secondly, with smaller team sizes, social interaction among students is strengthened and made more effective. Finally, by allowing class teaching to precede team work, STAD may reduce to the minimum the spate of members learning a deal of their own part of the team task but not the other content of the task allotted to other teams.

Relationship between Cooperative Learning, Self- Concept and Reading Comprehension Achievement

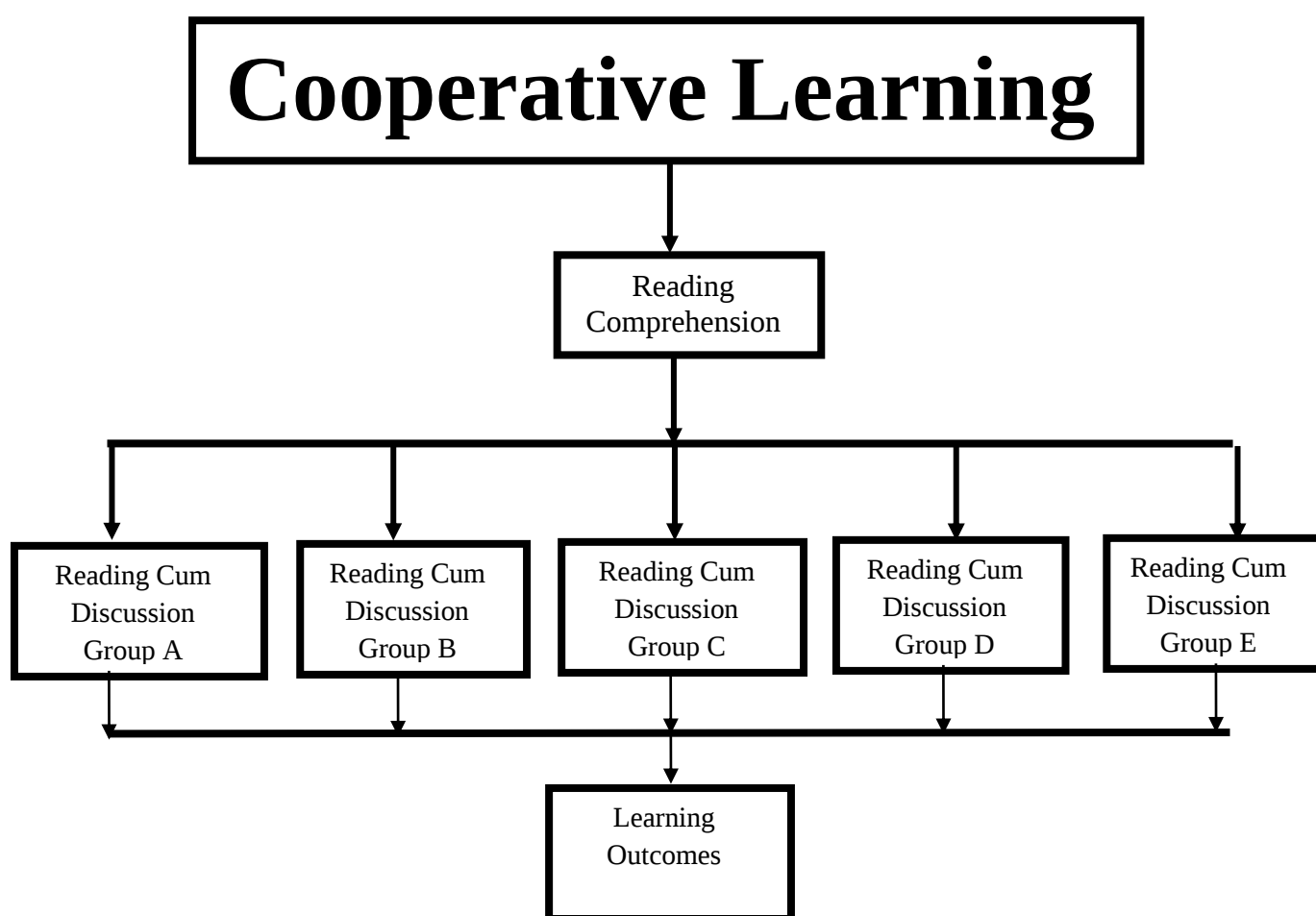


Figure 1: Schematic Representation of the Cooperative Learning Strategy

As noted earlier in the discourse, cooperative learning is regarded as one of the most researched teaching strategies today. Consequently, a large body of study can be said to exist on the effect of cooperative learning on students' self concept and

academic achievement. In spite of the availability of a large body of work, however, research findings continue to remain divergent as there is still no consensus among researchers on the effect or outcomes of the cooperative learning strategy on students' achievement.

In a series of studies carried out by Slavin (1991a), he found out that some students exposed to cooperative learning performed significantly better than those in the control group. Conversely, some of the studies carried out by him also revealed that students in the control group performed better than those taught using the cooperative learning strategy. Similarly, while Sharan and Sharan (1990) found that both elementary and secondary school students who were exposed to cooperative learning generally demonstrated a higher level of academic achievement and did better on questions assessing high level learning than did their peers taught with conventional method of instruction; Hainze and Berger (2007) found out that there was no difference in students' achievement among those taught using the Jigsaw classroom method of instruction and those taught using the traditional method of instruction. Similarly, the effect of the cooperative learning strategy on students' self concept has also continued to remain an issue on which educational psychologist have remained divided. For example, while Sadker and Sadker (1997) found out that students exposed to the cooperative learning strategy had higher levels of self concept; Topping et al (2013) found no differences among students exposed to cooperative learning and those taught using the conventional method of instruction.

Given therefore that the results of studies so far carried out by researchers have remained divergent on the effect of the cooperative learning strategy on

students' self concept and achievement, it is the researcher's contention that more studies need to be carried out in order to ascertain the actual differences in performance of students taught using the cooperative learning strategy and those taught using the conventional method of instruction.

THEORITICAL FRAMEWORK

Four theories providing the theoretical underpinning for the study were reviewed. They are:

- Theory of Cognitive Development by Jerome Bruner
- Social Cognitive Theory by Albert Bandura,
- Lev Vygotsky's Cognitive Learning Theory, and
- Humanistic Personality Theory of Carl Rogers

Theory of Cognitive Development by Jerome Bruner

Jerome Bruner is a cognitive psychologist who has been likened to Jean Piaget. Like Piaget, Bruner believed that individuals go through certain stages in their cognitive development which he identified as Inactive, Iconic and symbolic stages. But unlike Piaget, Bruner places much greater role on both language and environment which is why he is referred to as a cognitive structuralist (Ekoja & Ekoja).

According to Bruner, the Inactive stage is characterised by learning by doing, by acting, by imitating and by manipulating objects within the environment. At this development stage tasks are usually on how to crawl, walk, play with toys and generally use the body to be effective in the world. The Iconic stage, on the

hand is characterised by children's ability to start forming pictures or images to represent what is going on in their environment. Bruner further observes that this stage becomes increasingly important as the child grows older and is encouraged to learn concepts and principles that are not easily demonstrated.

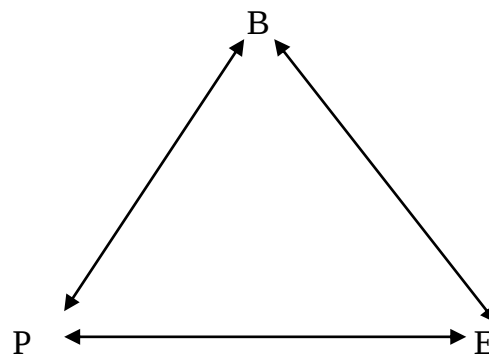
The third stage was identified by Bruner as the symbolic stage chiefly characterised by children representing their world through symbols, the most important of which is language. At this stage, children can through the aid of language plan for the future, abstract meanings and intentions from the behaviour of others. Bruner also contends that the hallmark of cognitive development is being able to pay attention and take into account several different possibilities at the same time.

It is obvious that Bruner's theory of cognitive development clearly provides both profound illumination and the theoretical underpinning for the cooperative learning strategy and other forms of instructional strategies that emphasize the environment in which the teacher and other students contribute to child's cognitive development. Furthermore, by placing emphasis on attention as pre-requisite for cognitive development, the theory also underscores the need for adequate attention to ensure team success. By placing emphasis on language, the theory also underscores the need for group discussion as an integral part of the cooperative learning strategy.

Social Cognitive Theory (SCT) by Albert Bandura

The social cognitive theory was formulated by Albert Bandura (1925 -) and is today regarded as one of the most influential learning theories. Social Cognitive

theory focuses on the learning that occurs within social context. To underscore the importance of the theory, Bandura (1977) observed that learning would have been both extremely laborious and hazardous if people would rely only on the effects of their actions. He however observed that, since, most human behaviour is learned observationally, through modelling, from observing others , one forms an idea of how behaviour are formed and on later occasions this coded information serves as a guide for action.



Social Cognitive theory: B Represents behaviour, P represents personal factors in the form of cognitive, affective, and biological events, and E represents the external environment

Figure 2 Source: Pajeres (2002). Overview of Social Cognitive theory and Self-efficacy.12-8-04. From <http://www.emory.edu/EDUCATION/mfp/eff.html>.

Bandura (1977) observes that the interaction between the person and behaviour involves the influences of a person's thoughts and actions. The interaction between the person and the environment involves human beliefs and cognitive competencies that are developed and modified by social influences and structures within the environment. He further state that interaction between the environment and behaviour involves a person's behaviour determining the aspects of their environment and in turn their behaviour is modified by that environment. Of major concern to the present study, however, especially given the highly structured nature

of the cooperative learning strategy, are the four steps or elements of social Cognitive Theory which Bandura identified as attention, retention, reproduction and motivation (Cherry, 2011).

Attention: This step emphasizes the importance of attention in observational learning. Anything that detracts learning during the learning process will have a negative effect on learning.

Retention: For learning to effectively take place, the ability of the learner to store the learned information is crucial. While a number of factors in the environment can negatively affect retention, it is worth noting to emphasize that the ability to pull up information later and act on it is vital to observational learning.

Reproduction: This step states that, once attention is paid to the model and information learned, next it will be time for learners to actually perform the behaviour that has been learned while further practice of the learned behaviour can lead to improvement and skill advancement.

Motivation: For observational learning to be successful, the learner has to be motivated to learn the behaviour that is being modelled. Reinforcements and punishments play an important role in motivation.

The Social Cognitive Theory can be said to provide the theoretical basis for the topic of study and therefore have enormous implications for the cooperative learning strategy. A basic or central idea in the theory is observation. Observation of what others are doing in the environment can be said to be the heart of social learning theory. In the same vein, observation can be said to be the heart of the cooperative

learning strategy. For the cooperative learning to successfully take place, students would need to observe what their more able peers or teachers are doing and try to do same.

However, aside from students observing what others are doing in the environment, a number of elements are essential for the success of cooperative learning. The success of cooperative learning will be hinged on the ability of the instructor to systematically structure lessons along these essential elements. First, for students to successfully learn the tasks allotted to their groups, they must pay attention to details given. To ensure that students pay attention, cooperative learning groups should be kept as small as possible – usually not more than five students in a group. Cooperative learning groups should be reminded that the success of their groups would be determined largely by the extent of attention given to details. The second condition for cooperative learning is retention. This refers to the ability of students in the various cooperative learning groups to remember or retain what has been observed. To ensure students in the various groups recall various group work or task, instructors should ensure that students rehearse what they learn (Ormrod, 1999).

The third condition necessary for social learning that gives useful insight into cooperative learning is reproduction. It is the evidence that the information is retained. This can come in form of group quizzes where group members would demonstrate or perform the behaviour that was observed. The fourth and final element essential for social learning which is equally applicable to cooperative learning is motivation. In a cooperative learning group, motivation takes the form of mentioning groups and individuals who have cooperatively and successfully carried

out tasks allotted to them. Groups and individuals who demonstrate appropriate social skills would be mentioned for recognition. Regular and appropriate recognition by the teacher of teams who do well will reinforce the positive behaviour.

Vitally important to Social Cognitive Theory is self-regulation. Self-regulation is when an individual has his own ideas about what is appropriate or inappropriate behaviour and chooses actions accordingly (Ormrod, 1999). There are aspects of self regulation. They are setting standards and goals, self observation, self judge, and self reaction. Promoting self regulation among students in a cooperative learning group can also be an important technique. For example, a cooperative learning team or a member may decide to complete a task assigned to it or him before going for the long break. The choice of team motto and logo by members are examples of self regulation to which students may be exposed using the Student Team- Achievement Divisions (STAD) of the cooperative learning strategy.

Theory of Cognitive Development by Lev Vygotsky

Lev Vygotsky (1896 – 1934) was a Russian developmentalist whose enormous contributions on cognitive development was not appreciated until several decades later after his writings were translated from Russian into English. Like Jean Piaget, Vygotsky believed that children can actively construct their own environment. But in sharp contrast to Jean Piaget, Vygotsky believed that adults in society foster children's cognitive development in an intentional and somewhat systematic manner. Vygotsky contends that adults continually engage children in meaningful and challenging activities and help them perform those activities successfully. His theory emphasised the importance of society and culture in

promoting cognitive growth to such an extent that his theory is sometimes referred to as the socio-cultural perspective (Ormrod, 2000). Vygotsky (1962) averred that even complex mental processes begin as social activities; as children develop, they gradually internalize those processes and begin to use them independently. So vital is the role of environment in Vygotsky theory of cognitive development that Sandtrock (2005) aptly described it in the following words:

Vygotsky portrayed the child's development as inseparable from social and cultural activities. He believed that the development of memory, attention, and reasoning involves learning to use the inventions of society, such as language, mathematical systems, and memory strategies. In one culture, this might consist of learning to count with the help of a computer. In another, this might consist of counting on one's fingers or using beads. (p.47)

Lev Vygotsky's postulation on the importance of the role of social interaction has generated profound interest in today's popular held opinion that knowledge is situated and collaborative (John- Steiner & Mahn, 2003; Rogoff, 2003). These researchers opine that knowledge is not generated from within the individual but rather is constructed through interaction with other students, adults and objects in the culture such as books. This view underscores the role of social interaction and other cooperative learning activities in schools. Vygotsky also contend that children's cognitive development is contingent on their social interaction with other more skilled adults and peers.

Vygotsky identified three steps through which children develop cognitively through social interaction. They are the zone of proximal development; scaffolding, dialogue and guided participation; and language and thought.

The Zone of Proximal Development: The term zone of proximal development is used by Vygotsky to mean that range of tasks that a child can complete independently working on his own and those completed with the guidance and assistance of others such as the teacher, parents and peers. Vygotsky refers to those tasks that the pupil or student can accomplish working on his own as the lower limit of the ZPD, while the upper limit of the ZPD refers to those tasks that the child accomplishes with the guidance of an able instructor (s). Further elucidation by other researchers (Kinger, 2002; Panofsky, 1999) refers to ZPD as the child's cognitive skills that are in the process of maturing and can be accomplished only with the assistance of a more skilled person.

Scaffolding, Dialogue, and Guided Participation: Scaffolding is closely linked to the idea of ZPD and simply means the level of support. Scaffolding is simply adjusting the amount of guidance, over the course of a teaching session, by a more-skilled person who could be teacher or a more skilled peer to fit the child's current performance (Donovan & Smolkin, 2002; John- Steiner & Mahn, 2003; Many, 2002). Teachers and other more skilled peers who use scaffolding would normally give direct instruction and other forms of assistance to pupils and students while the task is being mastered and then give less of the instruction as students' competence increases.

Dialogue is an important tool of scaffolding. Vygotsky posits that children possess a rich but unsystematic, disorganised and spontaneous concepts in contrast to the teacher's or more skilled peer's more systematic, logical and rational concepts. But in the process of dialogue between the child and the teacher or more skilled peer, the child's concepts become more systematic, logical and rational. He contends that dialogue with others is an essential condition for promoting cognitive development.

Another idea that is important to our understanding ZPD is the concept of guided participation developed by Rogoff (1990, 2003). Guided participation involves the systematic arranging and structuring of a child's participation in activities. She posits that a well arranged and structured activity by a teacher or a more skilled peer can help stretch and support children's understanding of skills and that are important for success in a culture.

Language and Thought: Vygotsky (1962) believes that children not only use speech for social communication but to plan, guide, and monitor their behaviour. He calls this use of language for self-regulation *private speech*. Vygotsky further posits children who use a lot private speech are more socially competent than students who don't. He also observes that all mental functions have external or social origins.

The implications of the Lev Vygotsky's theory of cognitive development to our understanding of the cooperative learning strategy are undeniably extensive. Like the social learning theory reviewed earlier, the Vygotsky theory gives far more credence to learning through cooperative efforts than to any other form of instructional strategy. Vygotsky viewed the first step as occurring in two forms

known as the lower limit Zone of proximal development and upper limit of Zone of proximal development. From the perspective of cooperative learning, the former can be seen in terms of those specific tasks which individuals in the teams are given, while the latter refers to the efforts made by the teams to help the learning of individuals.

The second step is scaffolding, dialogue and guided participation. The gradual and regular use of this step ensures the success of the cooperative learning strategy. Scaffolding takes the form of the teacher or other more able peers ensuring that students are supported through class presentations and group discussions. Scaffolding also includes ensuring that students are helped to pay attention during team work. More importantly, scaffolding in team work entails the gradual release of responsibility, and less of instruction as students master their respective team work. As a tool of scaffolding, dialogue takes the form of discussion between the individual students and other members of the group cooperative learning group. This results in trust-building among members and the better mastery of their allotted tasks. Guided participation in cooperative learning class could be seen as the proper structuring of team activities to ensure success of the team through individual participation in all team work.

Humanistic Personality Theory of Carl Rogers

The humanistic personality theory of Carl Rogers views the self- concept as a component of personality development that is basically seen as the perception each person has of himself or herself. Carl Rogers' theory evolved from his work as a clinical psychologist following extensive therapeutic interactions with many clients and developed as an offshoot of his theory of client- centred therapy (later known as person centred theory). Carl Rogers was first and foremost a therapist, with an abiding respect for the dignity of persons and an interest in persons as subjects rather than objects (Pescitelli, 2011).

Rogers (1959) posits that the human 'organism' has an underlying 'actualizing tendency', which aims to develop all capacities in ways that maintain or enhance the organism and move it toward autonomy. He maintains that this tendency is directional, constructive and present in all living things. A distinctly psychological form of the actualizing tendency related to the self is the self actualizing tendency. Rogers (1959) posits that this involves that portion of experience symbolized in the self and can be seen as a push to experience oneself in a way that is consistent with one's conscious view of what one is (Maddi, 1996). Also connected to the development of the self- concept and self- actualizing tendency are secondary needs (assumed to be learned in childhood): the need for positive regard from others and the need for positive self- regard, an internalized version of the previous. These lead to the favouring of behaviour that is consistent with the person's self- concept (Maddi, 1996). He states that the human organism's 'phenomenal field' includes all experiences available at a given moment, both conscious and unconscious. However,

as development occurs a portion of this field becomes differentiated and this becomes the person's 'self' (Rogers, 1959). Rogers originally did not recognize the importance of self which he had referred to in his original work as vague, ambiguous, and scientifically meaningless. However, through extensive work with clients, Rogers came to appreciate the importance of the self which he described as:

The organized, consistent, conceptual gestalt composed of perceptions of the characteristics of the 'I' or 'me' and the perceptions of the relationships of the 'I' or 'me' to others and to various aspects of life, together with the values attached to these perceptions (p. 200).

Rogers viewed the personality structure in terms of just one construct. He identified it simply as the self – although it is generally known today as the self – concept. Ryckman (1993, p.106) defines the self as 'the organized set of characteristics that the individual perceives as peculiar to himself / herself.' The self – concept is a collection of beliefs about one's own nature, unique qualities, and typical behaviour (Weiten & Lloyd, 2003). According to Rogers the self- concept can have a subjective nature. This is to suggest that one's self – concept may not be consistent with one's experiences. Most people are prone to distort their experiences to some extent to promote a relatively favourable self – concept. For example a student may believe himself to be intelligent but his or her performance in an examination may suggest otherwise. Rogers used the term incongruence to refer to the disparity between one's self- concept and one's actual performance. However, where the student's self- concept is reasonably accurate when compared to performance it is said to be congruent with reality (Weiten & Lloyd, 2003)).

Rogers also believed that, in terms of personality development, childhood experiences can promote congruence or incongruence. He posits that parents who early in life make their affection conditional (that is, show affection to their children based on the child's behaving well and living up to parental expectation) lead to the distorting or blocking out of their self – concept those experiences that make them feel unworthy of love. On the other hand children, Rogers posited that parents who show unconditional affection would have children who would have less need to block out unworthy experiences because they have been assured that they are worthy of affection no matter what they do. Evidently, what this suggests is that unconditional love fosters congruence while conditional love fosters incongruence.

The humanistic personality theory by Carl Rogers throws tremendous illumination on our understanding of the self concept relative to the key variable of the study: cooperative learning. It is evident from the review above that the various childhood experiences to which students are exposed can play a crucial role in personality development and by implication lead to the development of positive self concept. It is evident, based on the theory reviewed, that a well structured cooperative learning that places emphasis on the five components of the strategy (positive interdependence; equal participation, individual and group accountability simultaneous interaction, and group processing) may lead to the feeling of unconditioned affection by students as a result of interaction with their more able peers and teachers, which would in turn lead to positive self concept. This feeling of positive self concept may act as source of push or spur to learning.

EMPIRICAL STUDIES

Effect of Cooperative Learning on Academic Achievement

Zisk (2011) carried out a study titled ‘The effects of cooperative learning on academic self concept and achievement of secondary chemistry students’ using the experimental design. He used a sample size of 49 students who were randomly selected with 25 students in the control group and 24 students in the experimental group. The purpose of the study was to determine whether or not using the cooperative learning teaching methods in a High School Chemistry class would significantly increase students’ academic achievement.

The study also used the School Attitude Measure (SAM) as instrument to test the hypotheses. The Analysis of Covariance (ANCOVA) was used to analyse the data from the control and experimental group. The statistical analysis from these test scores showed a significant increase for the cooperative learning group. This finding reinforces the notion that the cooperative learning teaching methods improved academic achievement. By comparing a cooperative learning teaching method with a traditional method this study has demonstrated that students in the cooperative learning group performed much better than those taught using the conventional method of instruction..

In related study by Ozsoy and Yildiz (2004) titled ‘The effect of learning together technique of cooperative learning method on student achievement in mathematics teaching’ in Balikesir, Turkey, the experimental design was used to determine how efficacious the cooperative learning strategy was when compared to the traditional method of instruction. The sample or subjects of the study consisted of

70 seventh- grade students largely from middle class families and randomly assigned into the experimental (36 pupils) and control groups (34 pupils). Similarly, 40% of subjects were girls.

The results of this study showed that the learning together technique of cooperative learning method was more effective than the traditional method in maths teaching of primary school 7th class. Aside from the finding that the cooperative learning strategy was more effective in teaching mathematics than the traditional method, further findings also showed that students in experimental group connected with each other and their teacher for learning and teaching, whereas in traditional method, there was an atmosphere that the connection was less and activities were teacher- centred. Further findings showed that students learning cooperatively explained their opinions, presented alternative strategies that helped them to better understand maths concepts, and gained more self confidence than those in the class where the traditional method was used. Perhaps one of the most interesting findings of the study was the expression of desire by the students in the experimental class to have the cooperative learning strategy used at other lessons or subjects too.

Abu and Flowers (1997) carried out a study on The Effect of Cooperative Learning Methods on Achievement, Retention and Attitudes of Home Economics Students in North Carolina. The study population consisted of Home Economics students enrolled in a food and nutrition course in high schools in the Central Region of North Carolina. The study made use of the quasi experimental study with 91 students in the cooperative learning group (STAD) and 106 students in the non cooperative learning group using the random sampling technique. A test instrument

developed by the researcher was administered to both groups after instruction. The Multivariate Analysis of Covariance (MANCOVA) was used to analyse the data related to the dependent variables of the student achievement and retention of information. In contrast to the two findings above, the study found no significant differences in performance in Home Economics or retention of information between students exposed to cooperative learning and those taught using the conventional method of instruction. .

Chianson, Kurumeh and Obida (2010) conducted a study titled ‘Effects of Cooperative Learning Strategy on Students’ Retention in Circle Geometry in Secondary Schools in Benue State. The quasi- experimental design was adopted with the purpose of study being to investigate the effect of the cooperative learning strategy in enhancing the retention of circle geometry among Senior Secondary students in Benue State. The study made use of 358 students as sample for the study through the purposive sampling technique.

The study made use of two classes of students assigned to the cooperative learning group (174 students) and the conventional learning group (184 students). The method of statistical analysis used to test the hypotheses formulated was the t-test which showed that there was a significant difference in the student retention between the experimental and the control group. The findings showed that students in the cooperative learning group performed much better in the retention and recalling of circle geometry than students in the conventional class. The study further showed that students in the cooperative learning class were more attentive in class activity

and showed greater enthusiasm during the mathematics class than those in the conventional class.

Hainze and Berger (2007) conducted a study titled ‘Cooperative learning, motivational effects, and students’ characteristics: An experimental study comparing cooperative learning and direct instruction in 12th grade physics classes.’ The study used the quasi-experimental design to compare the jigsaw classroom method of instruction with traditional direct instruction. The study made use of 137 students in the 12th grade who were put in the cooperative learning class and the direct instruction or conventional class. The students took pre-test and post-test in physics while the Multivariate Analysis of Variance (MANOVA) was used for testing of the data. The study found no significant differences in academic performance between students in the cooperative learning class and those in the conventional class.

Iqbal (2011) conducted a study in Rawalpindi, Pakistan, to determine the effect of cooperative learning on academic achievement of secondary school students in mathematics using an experimental design. The sample size used for the study was 56 secondary school students. Of this number, there were 28 students each in the experimental and control groups. The pre-test, post-test and retention test design was used, while data generated was subjected to the t-test statistical analysis. Similarly, to test the treatment effects for high and low achievers of both the experimental and control groups on pre-test and retention tests, the factorial design (2x2) analysis of variance was applied.

The study found that students in the experimental group performed significantly better than students in the control group. Specifically, the study revealed that both high achievers and low achievers in the experimental group significantly outscored the high achievers and low achievers in the control group. The outcome of this study showed that the cooperative learning strategy was far more effective than the conventional or traditional method of instruction.

Ghaith (2002) carried out a study titled 'The relationship between cooperative learning, perception of social support and academic achievement learning.' A total of 135 students taking part in an Introductory English course at a private University in Lebanon constituted the sample for the study. After analysis of the data generated, the study revealed that cooperative learning and the degree of academic support provided by teachers were positively correlated with academic achievement. The study further revealed that cooperative learning was positively correlated with the perceived degrees of academic and personal support provided by teachers and peers but not correlated with the feelings of alienation from school.

It is evident from most of the empirical works reviewed that the cooperative learning strategy had proved to be far more effective in students' academic achievement than the conventional or traditional method of instruction. Even the findings of Hainze and Berger (2007), and Abu and Flowers (1997) which were at variance did not find the cooperative learning strategy to be less effective when compared to the conventional strategy. Consequently, the cooperative learning strategy can improve students' academic performance and make students feel good about school. This study therefore seeks to use the cooperative learning approach of

Student Teams Achievement Divisions to determine its effect on students' achievement in reading comprehension.

Effect of Cooperative Learning on Students' Academic Achievement as a Result of School Location

To ascertain the effect of school location on students' academic achievement using cooperative learning, Chianson (2012) carried out a study in Benue state titled 'School Location as a correlate of Mathematics Students Achievement in a Cooperative Learning Class.' The researcher made use of 174 Senior Secondary School II students drawn from government or public secondary schools in Benue State, who were taught circle geometry. The urban group had 84 students, while the rural school had 90 students; both schools were taught circle geometry using the cooperative learning strategy. One research question and one hypothesis were raised to guide the study. Mean scores and ANCOVA were used to analyse the data generated using GAT (Geometry Achievement Test) developed by the researcher. The findings of the study showed that students in urban schools significantly outperformed students in rural schools taught circle geometry using cooperative learning. More studies are, however, required to definitively verify this finding as other unforeseen factors such as parental socio-economic class, funding, et cetera, may have influenced the outcome.

Gilliam (2013) carried out a study at a small rural college titled 'The Impact of Cooperative Learning, Environmental Factors on Learning Outcomes and overall Excellence in the Community College Classrooms' The purpose of the study was to test the theory of social interdependence through the examination of student ratings

of the impact of cooperative learning on course learning environment factors, learning outcomes, and overall excellence of instruction and course when compared to classes not taught cooperatively. The study made use of the Quasi – experimental design in which one group of students was taught using the cooperative learning strategy (abbreviated CL), while the control group was taught using the traditional method of instruction identified in the study as non cooperative learning (abbreviated as NCL). On the whole the study found out that students in the CL group recorded significant learning outcomes than students in the NCL.

Topping, Thurston, Tolmie, Christy, Murray and Karagiannidou (2013) carried out a study titled ‘Cooperative Learning in Science: Intervention in the Secondary School’ in Scotland. The study made use of 10 secondary schools in the west of Scotland and 11 in the East. The study made use of the Quasi- experimental design in which 259 students made the experimental group, while 385 constituted the control group. Three research questions were raised to guide the study. To analyse the data generated, the descriptive statistics were supplemented with the inferential statistical test of analysis of variance (ANOVA). A major finding of the study was that rural students performed more highly than urban pupils on all tests. The study also found that the self concept of students in the cooperative learning group did not significantly differ as a result of treatment from those in the control group.

Effect of Cooperative Learning on Self-Concept

Zisk (2011) conducted a study titled ‘The effects of cooperative learning on academic self concept and academic achievement of secondary school students’, cited earlier, using the quasi- experimental design. The result of the study, after the

analysis of variance (ANCOVA), showed that both types of self concept (performance based and reference based) increased at significant levels for students who were exposed to cooperative learning as compared to students in the traditional classroom. The study showed that students exposed to the cooperative learning strategy developed a greater sense of academic self concept than students who were exposed to the traditional method of instruction.

Hainze and Berger (2007) earlier found out that there were no differences in students achievement in physics among those taught using the Jigsaw classroom method of cooperative instruction and those taught using traditional or direct instruction, but revealed that students with low academic self concept profited more from cooperative learning instruction than from direct instruction because they experienced a feeling of greater competence. By implication, the study has revealed that the jigsaw cooperative learning technique has significant effect on students' self-concept.

The studies reviewed above showed that students taught using the cooperative learning strategy recorded more positive effects on their self concept than students taught using the conventional or traditional method of instruction. This study seeks to determine the effect of the cooperative learning strategy on students' self concept and achievement in reading comprehension.

Summary of Reviewed Literature

The review of literature provided profound illumination on the variables of the topic under study. Three concepts were reviewed; they are reading comprehension, cooperative learning and self concept. The various works reviewed on the concept of

reading comprehension revealed the centrality of students' ability to comprehend printed texts in their overall academic growth and development. The review also showed a consensus among researchers that the vast majority of students have difficulties comprehending printed texts. The conceptual review on the self concept showed the self concept may be an important predictor or determinant in goals that students can achieve. The review also gave credence to social interaction as a determinant in the development of the self concept. Hence, a routinely well structured cooperative learning strategy can play an important role in the development of the self concept.

The section also reviewed four theories under the theoretical framework. They are Jerome Bruner's theory of Cognitive Development, the Cognitive Learning Theory by Albert Bandura, the Theory of Cognitive Development by Lev Vygotsky and the Humanistic Personality theory of Carl Rogers. The first three theories clearly underscore the importance of social interaction in students' academic development, while the humanistic personality theory of Carl Rogers highlights the importance of interaction and experiences with others in the environment in the shaping of self-concept.

The review showed that the cooperative learning strategy had a far more positive effect on students' academic achievement than the conventional method of instruction. Students taught using cooperative efforts made more progress at school, felt better about schooling and developed more positive self concept, among other benefits, than those taught using the conventional teaching strategy. The review also showed that students in urban schools taught using cooperative learning performed

better than their counterparts in rural schools taught using the same strategy. It is the researcher's contention, however, that more studies need to be carried out to verify these findings..

A major gap in the works reviewed showed that the effect of the cooperative learning strategy on students' self concept and achievement in reading comprehension in Education zone B of Benue State has not been investigated. A few related studies so far carried out in the state and the zone in particular showed the misuse of the cooperative learning strategy and the near total disregard for detailed experimental procedure by researchers. To fill these apparent gaps, this study sought to investigate the effect of the cooperative learning approach of the Student Teams Achievement Divisions (STAD) on students' self concept and achievement in reading comprehension in Education Zone B of Benue State.

CHAPTER THREE

RESEARCH METHOD

This section dealt with research design, area of study, population of the study, sample and sampling techniques, instruments for data collection, experimental procedure, method of data collection and analysis.

Research Design

The research design used was the Quasi – experimental design. The term quasi-experimental design refers to a type of research design that shares similarities with the true experimental design. Quasi- experimental designs are considered to be natural experiments since findings allow for generalizations to be made about the population. The quasi- experimental design was considered appropriate for the study, given that the random assignment of students to experimental and control groups was not possible as schools would not allow their class arrangements to be disrupted by the researcher (Awotunde, Ugodulunwa & Ozoji, 1997; Shuttleworth, 2008). Specifically, the study made use of the non-equivalent control group pre test –post test design. The study made use of an experimental group and a control group drawn from intact groups/classes.

Figure 3: The diagrammatic representation of the design is given below:

Groups	Pre-test	Treatment	Post-test
Experimental Group	O_1	x_1	O_1

Control Group	O_1	x_2	O_1

Key:

O_1 = Pre- test administered to treatment and control groups

x_1 = Treatment given to experimental group using cooperative learning.

O_1 = Post – test administered to the two groups

x_2 = Treatment given control group using the conventional method of instruction

Area of the Study

Benue State is one of the six states that make up the North Central Geopolitical Region of Nigeria. The State has three education zones known as Zones A (North East), B (North West) and C (Benue South). Using the simple random sampling technique, Zone B (North West) was selected to constitute the area of the study. With Makurdi, the state capital cited within it, the Education Zone B is the most urbanised, densely populated and has large rural settlements as well. Commensurately, the zone has a high number of public secondary schools in its urban and rural areas. This justified the choice of the zone as area of study.

Population of the Study

All JSS II students in Zone B of Benue State constituted the population of the study. Based on the 2010/2011 school census conducted by the Benue State Ministry of Education, there were 288 secondary schools in the state. In all, a total of 14,608 students drawn from public schools constituted the population of the study (see Appendix X). The choice of JSS 11 is premised on two factors. First, the JSS 11 arm had the most students compared to the other two arms of JSS 1 and 111. Second, JSS 11 was considered to be the most stable since JSS 1 students may still be adapting to the new school environment having just transited from primary school and JSS 111 students preoccupied with preparations for the Junior Secondary School Examinations.

Sample and Sampling Techniques

The sample of the study is made up of 105 students from four intact Junior Secondary School II Classes. The four intact classes were randomly selected from urban and rural schools. First, the disproportionate stratified sampling technique was used in selecting schools into on basis of location. From a total of eighty one (81) urban secondary schools within Makurdi Metropolis, two schools were selected using the simple random sampling technique; while two schools were also randomly selected from fifteen (13) rural based schools. The two urban schools are Government College, Makurdi (33 students) and Government Model Secondary School, Makurdi (38 students); while the two rural schools are UBE Junior Secondary School, Mu (21students) and UBE Junior Secondary School, Apir (13 students). Through random sampling, Government College, Makurdi (urban) and

UBE Junior Secondary School, Mu (rural) were selected to constitute the Experimental Group. Government Model Secondary School, Makurdi (urban) and UBE Junior Secondary School, Apir (rural) were selected through random sampling to constitute the Control group. The experimental group was made up of 54 students, while the control group had 51 students.

Instruments for the Study

Two instruments were developed by the researcher to enable him generate data for analysis. They are:

1. Reading Comprehension Achievement Test (SSAT)
2. Students' Self-Concept Scale (SSCS).

Development of the Instruments

Reading Comprehension Achievement Test (RCAT)

The Reading Comprehension Achievement Test (RCAT) is made up of thirty (30) questions drawn from four topics. The topics were taught during a period of four weeks. The four topics are social group, water pollution, group behaviour and marriage. The topics were drawn from the syllabuses for Junior Secondary School 11 in Social Studies, Integrated Science and Christian Religious Knowledge/Islamic Studies approved by the Ministry of Education, Benue State. These subjects were chosen because experts aver that students have difficulties comprehending texts in these areas (Anderson & Freeboy, 1981; Eze, 1999; Ogle and Correa- Kovtun, 2010). The RCAT has nine (9) questions on social group, nine (9) questions on group behaviour, ten (10) questions on marriage, and five (5) questions on water pollution

(see Appendix III for the Blueprint). In all, the Reading Comprehension Achievement Test (RCAT) has twenty three (23) multiple choice questions, and seven (7) matching type questions (see Appendix I).

Students' Self-Concept Scale (SSCS).

The Students' Self Concept Scale (SSCS) was constructed by the researcher. This followed review of related literature on the self concept (Ekoja & Ekoja, 2006; Huit, 2009; Rosenberg, 1965; Strage & Bradt, 1999; Weyton & Llyod, 2003). The SSCS is a 15 – item instrument on a four point rating scale ranging from strongly agrees to strongly disagree (see Appendix II). Positive statements are scored from 4 points to 1 point for negative statements; while negative statements are reversed scored from 1 point to 4 points for positive statements.

Validation of the Instruments

The Reading Comprehension Achievement Test (RCAT) was also given to three experts in Language Education, Educational Psychology and Curriculum & Instruction for face- validation. The various suggestions made were used in further improving the standard of the instrument (see Appendix VIII). The Students' Self-Concept Scale (SSCS) was also subjected to face - validation by three experts in Cognitive Psychology, Educational Psychology and Counselling Psychology. The suggestions made by these experts were used in further improving the standard of the instrument (see Appendix IX).

Reliability of the Instruments

To test for the internal consistency of the Reading Comprehension Achievement Test (RCAT), a trial testing was carried out using 30 JSS 11 students from a Secondary School within Makurdi metropolis other than the schools sampled for the study. The 30 students were administered a test using the RCAT and retested after two weeks. The results obtained were subjected to internal consistency reliability coefficient testing using Kuder Richardson 20 (KR-20). The calculated KR-20 estimate value of 0.77 was obtained (see Appendix IV); while the test for stability of the same instrument using Pearson Product Moment Correlation Coefficient yielded a Pearson r value of 0.55 (see Appendix V). Pallant (2001) and Nworgu (1991) posit that an instrument that yields internal consistency and stability value of 0.50 is considered to be of high value. Hence the Reading Comprehension Achievement Test (RCAT) can be said to be of high reliability content. The test for stability of the Students' Self-Concept Scale (SSCS), using a test – retest was calculated using Pearson Product Moment Correlation Coefficient, which yielded a Pearson r value of 0.53 (see Appendix VI). To also test the SSCS for internal consistency, a Cronbach's alpha estimate value of 0.76 was obtained (see Appendix VII). The SSCN was therefore considered to be of high reliability content (Pallant, 2001; Nworgu (1991),

Development of Instructional Programmes

The researcher developed two different sets of lesson plans: one for the experimental group and the other for the control group. For the experimental group five different lesson plans were developed and taught using the cooperative learning strategy (see Appendix XI). For the control group, five different lesson plans were

also developed and taught using the conventional method of instruction (see Appendix XII). The treatment for the two groups lasted four weeks

Validation of Lesson Plans

The two sets of lesson plans developed by the researcher for the experimental and control groups were given to two experts in the Department of Curriculum and Teaching of Benue State University, Makurdi, for validation. The useful suggestions made by the experts were used in further improving the standard of the developed lesson plans (see Appendix XIV).

Trial Testing

The Reading Comprehension Achievement Test (RCAT), Students' Self Concept Scale (SSCN) and the lesson plans developed for the study were trial tested using twenty (20) JSS 11 students in a different school other than the schools sampled for the study. After the trial testing, a new and more realistic time of 45 minutes was fixed for the test as against 1 hour originally allotted. The decision was informed by the fact that the vast majority of students had finished answering the questions on the RCAT before the allotted time. Following complaints by students, some of the words and statements considered ambiguous were modified to ensure more clarity. Similarly, teachers in both the experimental and control groups made useful suggestions on the need to concisely state the instructional objectives and to provide more appropriate teaching aids. These suggestions were used, accordingly, in improving the standard of the lesson plans.

Procedure for Training Teachers in the Cooperative Learning Group

The teachers in the experimental group were exposed to both theoretical and practical training on how to apply the cooperative learning strategy with emphasis on the use of STAD. The theoretical aspect of the training exposed teachers to the philosophy of the strategy; while the practical training exposed them to the step by step elaborate procedure for implementing the strategy in the light of classroom reality (see Appendix XV for the training manual).

Experimental Procedure

The study involved two groups. They were the experimental and control groups. On the first day of the experiment, the 105 students that made up the two groups from the four sampled schools were pre tested using the two instruments developed by the researcher. The Reading Comprehension Achievement Test (RCAT) was first administered to students followed afterwards by the administration of the Students' Self concept Scale (SSCS).

After the pre test, students in both the experimental and control groups were taught in their various schools during class hours for five weeks. The teachers also maintained their usual morning periods during which time reading comprehension is taught in the schools. The students in the experimental group were taught using cooperative learning, while the students in the control group were taught using the conventional method of teaching. In all, both the experimental and control groups were taught a total of five lessons each.

After the pre test, the researcher adopted the following step by step procedure for the cooperative learning group:

Step 1: Teachers in the experimental group were exposed to both theoretical and practical training on the use of cooperative learning. The training manual or package used is presented in Appendix XV. The two teachers for the cooperative learning groups were also given lesson plans specially designed for cooperative learning (see Appendix XI) and the training manual for cooperative learning (see Appendix XV).. To ensure that synergy existed between students and teachers, students were also sensitized to the cooperative learning strategy (see Appendix XVI).

Step 2: For the experimental group, there was first, normal class teaching by the teacher. This was preceded by the splitting of class into teams or groups. Adequate measures were taken to ensure no team had more than five (5) students. In all, there were a total of twelve teams or cooperative learning groups from the two schools. The first school had seven (7) teams of 5-5-5-5-5-4-4 students; while the second school had 5-4-4-4-4 students. The teams were identified by alphabets (code named Team A, Team B, Team C and so forth) giving a total of 12 groups. Each topic taught by the teacher during class teaching was broken into sub - topics for students in the experimental group to cooperatively study the pronunciation and meanings of words used in texts as well as engage in group /team reading and discussions. Similarly, teaching in the control group was conducted using the conventional method of instruction by studying pronunciation and meanings of vocabularies used in text and preceded by individual reading of texts by students.

Step 3: Each cooperative learning group or team had a facilitator, recorder and time keeper which were routinely rotated among members to ensure that each member contributed to individual and group success. To eliminate the free rider effect,

teachers were trained on the correct use of STAD to ensure that all team members took part in group discussions (see Appendix XV).

Step 4: After the four weeks of treatment during which time the experimental group was taught using cooperative learning and the control group was taught using conventional method, a post test was administered to the two groups after the reshuffling of items on the Reading Comprehension Achievement Test (RCAT).

Control of Extraneous Variables

A number of extraneous variables were identified by the researcher as having the capability of producing some adverse effects on the findings of the study unless adequately controlled. The following variables were identified and the strategies to ensure they were adequately controlled are carefully discussed:

1. **Teacher Variability:** It is a fact that differences in teachers' training, charisma and experience, among other factors are essential determinants in quality of instruction and by implication students' level of comprehension of printed materials. To control this variable, the teachers for both the experimental and control groups were given lesson plans specially prepared by the researcher. For the two teachers in the experimental group, adequate training (theoretical and practical) was given by the researcher to ensure that the cooperative learning strategy was applied correctly (Appendix XV).
2. **Non- Randomization of subjects/students:** To control the lack of randomization in the selection of sample for the study, the Analysis of co-variance (ANCOVA) was used to analysis the data generated.

3. **Social Skills:** It is an incontestable fact that the cooperative learning strategy is a highly structured method of teaching. Its misuse by educators has largely accounted for its failure. Given that the cooperative learning strategy places huge emphasis on team work, the imbibing of social skills is crucial to the success of the strategy. To this end, a training package was developed by the researcher to inculcate social skills that are essential for the successful use of cooperative learning by students (see Appendix XVI). It was also obvious that the presence of the researcher would undoubtedly have led to suspense and heightening of tension among students. This variable was further checked by the training and sensitization to which students were exposed
4. **Training for research assistants/ teachers:** Inadequate training and ignorance on the part of research assistants/teachers could have had adverse effects on the outcome of the study. To check this variable, the research assistants were given adequate training covering both the theoretical and practical aspects of cooperative learning (see Appendix XV).
5. **Tests or homework during period of the study:** Given that tests and homework by teachers could have had some adverse effects on the study; measures were taken to ensure that no tests and homework were given to students during the period.

Method of Data Analysis

To analyse the data generated, mean scores and standard deviations were used in answering the research questions that were raised, while the Analysis of Co-variance (ANCOVA) was used to test the hypotheses that were formulated at $p < .05$

level of significance. ANCOVA was used to determine if there is a significant difference in the mean scores of the groups. The choice of ANCOVA had become necessary because the method statistically controlled for the effects of covariates that are not of primary interest to the study and to adjust for pre test score differences among the groups..

CHAPTER FOUR

RESULTS

The results of the study are presented in line with the research questions raised and hypotheses formulated to guide the study.

Research Question One

What are the differences in the reading comprehension achievement mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction?

Table 1: Students' Pre test and Post test Mean Scores and Standard Deviations in Reading Comprehension

Treatment Groups		Pre- test	Post-test	Mean Gain Score
Experimental (Cooperative Learning) Group	Mean	12.07	19.48	7.56
	n	54	54	
	Std. Deviation	4.62	5.18	
Control (Conventional) Group	Mean	11.96	13.08	1.12
	n	51	51	
	Std. Deviation	4.63	5.15	

Table 1 above shows that students exposed to the cooperative learning strategy had a pre test mean score of 12.07 and standard deviation of 4.62, while the post test mean score of students for the same group was 19.48 and standard deviation 5.18. The mean gain between the pre test and post test was 7.41. For students taught using the conventional method of instruction, the pre test mean score was 11.96 and standard deviation of 4.63. The post test mean score for the group was 13.08 and standard deviation 5.15. The mean gain score for the group was 1.12. Table 1 also shows that the standard deviations of 4.62 for pre test and 5.18 for post test of students in the

experimental group was small, indicating that the scores are less spread out from the mean. The standard deviations of 4.63 for pre test and 5.15 for post test of students in the control group indicate that the variation of the scores from the mean was also small. However, the mean gain score for students in the experimental group exposed to treatment using cooperative learning was 7.41, while the mean gain for students in the control group taught using the conventional method of instruction was 1.12. This shows that students in the experimental group performed better than those in the control group.

Hypothesis one

A corresponding hypothesis generated to further answer research question one is.

HO₁: The reading comprehension achievement mean scores of students exposed to cooperative learning will not significantly differ from those taught using conventional method of instruction.

**Table 2: Summary of Analysis of Covariance (ANCOVA) on
Students' Post test Scores in Reading Comprehension**

Source	Sum of Squares	Df	Mean square	F	Sig.	Partial Eta Squared
Corrected Model	1448.189 ^a	4		15.236	.000	.379
Intercept	2805.906	1	362.047	118.070	.000	.541
Pre-Achievement	19.825	1		.834	.363	.008
Treatment	1382.810	1	2805.906	58.191	.000	.368
Location	24.447	1		1.029	.313	.010
Treatment* Location	335.070	1	19.825	14.100	.000	.124
	2376.325	100				
	31967.000	105	1382.810			
	3824.514	104				

Table 2 above indicates that treatment using cooperative learning had a significant effect on students' achievement in reading comprehension. The F-value of 58.191 is shown to be significant at .000 and also having been significant at 0.05 level of significance. Therefore, the null hypothesis which states that, the reading comprehension achievement mean scores of students exposed to cooperative learning will not significantly differ from those taught using the conventional method of instruction, is rejected.

Research Question 2

What are the differences in the self concept mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction?

Table 3: Students' Pre test and Post test Mean Scores and Standard Deviations in Self Concept

Treatment groups		Pre-treatment Self Concept	Post-treatment Self Concept	Mean Gain Score
Experimental (cooperative learning) Group	Mean	40.48	48.04	7.56
	n	54	54	
	Std. Deviation	7.38	5.04	
(Conventional) Group	Mean	40.06	41.35	1.29
	n	51	51	
	Std. Deviation	4.29	5.06	

Based on results shown in Table 3, students in the experimental group had a pre treatment self concept mean score of 40.48 and standard deviation of 7.37, while the post experimental self concept mean score for the group was 48.04 and standard deviation 5.04. The mean gain for the experimental group stood at 7.56. The students in the control group recorded a pre treatment self concept mean score of 40.06 and standard deviation 4.29, while the post treatment self concept mean score was 41.35 and standard deviation 5.05. The mean gain for the group was 1.29. The result therefore, indicates that students in the experimental group recorded a higher mean self concept score than those in the control group.

The standard deviations of 7.38 and 5.04 for the experimental group, and 4.29 and 5.06 for the control group show that the variation of the scores from the mean were also small and less spread out from the mean.

A corresponding hypothesis formulated to further address research question two is:

HO₂: The self concept mean scores of students exposed to cooperative learning will not significantly differ from those taught using the conventional method of instruction.

Table 4: Summary of Analysis of Covariance (ANCOVA) on Students' Post test Scores in Self concept

Source	Sum of Squares	Df	Mean square	F	Sig.	Partial Eta Squared
Corrected Model	1246.885 ^a	4	311.721	12.212	.000	.328
Intercept	4355.846	1	4355.846	170.650	.000	.631
Pre-self Concept	2.565	1	2.565	.100	.752	.001
Treatment	1076.975	1	1076.975	42.193	.000	.297
Location	22.730	1	22.730	.890	.348	.009
Treatment* Location	38.176	1	38.176	1.496	.224	.015
Error	2552.506	100	25.525			
Total	214449.000	105				
Corrected Total	3799.390	104				

Results presented in Table 4 reveal that treatment using cooperative learning had a significant effect on students' mean self concept scores. The F- value of 42.19 as a result of treatment is shown to be significant at .000 and also significant at 0.05 level of significance.

The result, therefore, shows that students in the cooperative learning group had their self concept more enhanced as a result of treatment than those in the control group. This is indicated by the higher mean self concept score by the cooperative learning group. Consequently, the null hypothesis which states that, the mean self concept scores of students exposed to cooperative learning will not significantly differ from those taught using the conventional method of instruction, is rejected.

Research Question three

What is the effect of school location on the reading comprehension achievement mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction?

Table 5: Students' Pre test and Post test Mean Scores and Standard Deviations in Reading Comprehension as a Result of School Location.

Treatment Groups	Urban						Mean Gain Score	Rural						Mean Gain Score
	Pre test			Post test				Pre test			Post test			
	n	$\bar{x}$	SD	n	$\bar{x}$	SD		n	$\bar{x}$	SD	n	$\bar{x}$	SD	
Experimental (Cooperative Learning) Group	33	10.57	3.55	21	21.05	5.40	10.48	21	13.03	5.00	33	18.48	4.86	5.45
Control (Conventional) Group	38	9.85	3.80	13	9.15	2.91	-0.7	13	21.68	4.70	38	14.42	5.08	1.74
n=		Number		$\bar{x}$ = Mean			SD= Standard Deviation							

Table 5 above shows that urban students exposed to the cooperative learning strategy had a pre test mean score of 10.57 and standard deviation of 3.55, while the post test mean score was 21.05 and standard deviation 5.40. The mean gain score between the pre test and post test stood at 10.48. For rural students exposed to cooperative learning the table shows that the students had a pre test mean score of 13.03 and standard deviation of 5.00, while the post test mean score for the same group stood at 18.48 and standard deviation 4.86. For rural students exposed to the cooperative learning strategy, the mean gain score was 5.45.

Urban students taught using the conventional method of instruction had a pre test mean score of 9.85 and standard deviation of 3.80. Their post test mean score stood

at 9.15 and standard deviation 2.91. Their mean gain score was -0.7 . Rural students taught using the same strategy had a pre test mean score of 12.68 and standard deviation of 4.70. The post test mean score was 14.42 and standard deviation 5.08. The mean gain score for the group stood at 1.74. The standard deviations of 3.55 for pre test and 5.40 for post test of urban students and 5.00 for pre test and 4.86 for post test of rural students exposed to the cooperative learning strategy shown in the Table above were small and less spread out from the mean. The standard deviations of 3.80 for pre test and 2.91 for post test of urban students and 4.70 for pre test and 5.08 for post test of rural students taught using the conventional method of instruction were also small and less spread out from the mean. The mean gain scores of 10.48 of urban students and 5.45 of rural students exposed to the cooperative learning strategy showed that they outperformed both urban and rural students in the control group who had mean gain scores of -0.70 and 1.74 in that order.

A corresponding hypothesis raised to further address question three is:

HO₃: There is no significant difference in the reading comprehension achievement mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction as a result of school location.

Results presented in Table 2 indicate that treatment using cooperative learning as a result of students' location had no significant effect on students' achievement in reading comprehension. The F-value of 1.029 as a result of school location is shown not to be significant at .333 having been tested at 0.05 level of significance.

Consequently, the null hypothesis which states that, there is no significant difference in the reading comprehension achievement mean scores of students exposed to cooperative learning strategy and those taught using the conventional method of instruction as a result of school location is not rejected.

Research Question Four

What is the effect of school location on the self concept mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction?

Table 6: Students' Pre Experimental and Post Experimental Mean Scores and Standard Deviations in Self Concept as a Result of School Location.

Treatment Groups	Urban							Rural						
	Pre		Post		Mean			Pre		Post		Mean		
	Experimental Concept		Experimental Self Concept		Gain Score			Experimental Self Concept		Experimental Self Concept		Gain Score		
	n	$\bar{x}$	SD	n	$\bar{x}$	SD		n	$\bar{x}$	SD	n	$\bar{x}$	SD	
Experimental (Cooperative Learning) Group	33	40.81	10.62	21	49.48	4.50	8.67	21	40.27	4.40	33	47.12	5.21	6.85
Control (Conventional) Group	38	38.23	3.03	13	41.08	4.61	2.85	13	40.68	4.51	38	41.45	5.26	0.77

Results presented in Table 6 show that urban students exposed to the cooperative learning strategy had a pre treatment self concept mean score of 40.81 and standard deviation of 10.62, while the post treatment self concept mean score was 49.48 and standard deviation of 4.50. The mean gain score between the pre treatment and post treatment mean scores was 8.67. For rural students, the pre treatment mean score

was 40.27 and standard deviation 4.40, while the post treatment self concept mean score was 47.12 and standard deviation 5.21. The mean gain score stood at 6.85. Urban students taught using the conventional method of instruction had a pre treatment self concept mean score of 38.23 and standard deviation of 3.03, while the post treatment self concept mean score was 41.08 and standard deviation 4.61. The mean gain for the group stood at 2.85. For rural students, the pre treatment self concept mean score was 40.68 and standard deviation 4.51, while the post treatment self concept mean score was 41.45 and standard deviation 5.26. The mean gain score for the group was 0.77. The standard deviations of 10.62 for the pre treatment self concept and 4.50 for post treatment self concept of urban students and 4.40 for pre treatment self concept and 5.21 for post treatment self concept of rural students exposed to the cooperative learning strategy were small and less spread out from the mean. The standard deviations of 3.03 for pre treatment self concept and 4.61 for post treatment self concept of urban students and 4.51 for pre treatment self concept and 5.26 for post treatment self concept of rural students taught using the conventional method of instruction were also small and less spread out from the mean. The mean gain scores of 8.67 by urban students and 6.85 by rural students exposed to cooperative learning showed that they had their self concept more enhanced as a result of the treatment than urban and rural students in the control group who had mean gain scores of 2.85 and 0.77 in that order.

A corresponding hypothesis raised to further address research question four is:

HO₄: There is no significant difference in the self concept mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction as a result of school location.

Results presented in Table 4 indicate that treatment using cooperative learning had no significant effect in the self concept mean scores of students exposed to the cooperative learning strategy than those taught using the conventional method of instruction as a result of location. This is because the F-value of .890 as a result of location is shown not to be significant at .348 having been tested at 0.05 level of significance. Consequently, the null hypothesis which states that, there is no significant difference in the self concept mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction as a result of school location is not rejected.

Research Question Five

What is the interaction effect of treatment and school location on the reading comprehension achievement mean scores of students?

Table 7: Interaction Effect of Treatment and School Location on Reading Comprehension Achievement Mean Scores of Students

Treatment Groups	Location of Subjects	Mean	Standard Deviation	N
Experimental (Cooperative learning) Group	Urban	21.05	5.40	33
	Rural	18.48	4.86	21
Control (conventional) group	Urban	9.15	2.91	38
	Rural	14.42	5.08	13

Table 7 above shows that urban students exposed to the cooperative learning strategy had a post test mean score of 21.05 and standard deviation of 5.40 in reading

comprehension as against the mean score of 9.15 and standard deviation of 2.91 by urban students taught using the conventional method of instruction. On the other hand, rural students exposed to instruction using the cooperative learning strategy had a post test mean score of 18.48 and standard deviation of 4.86 as against the mean score of 14.42 and standard deviation of 5.08 by rural students taught using the conventional method of instruction. Thus, since both urban and rural students in the experimental group performed better than urban and rural students in the control group, it can be deduced that there was no interaction effect of treatment and school location on the reading comprehension mean scores of students.

A corresponding hypothesis raised to further address research question five is:

HO₅: There is no significant interaction effect of treatment and school location on the reading comprehension achievement mean scores of students.

Results presented in Table 2 indicate that there was significant interaction effect of treatment and school location on the reading comprehension achievement scores of students. This is because the F-value of 14.100 as a result of treatment and school location is shown to be significant at .000 and also significant at 0.05 levels of significance. The null hypothesis which states that, there is no significant interaction effect of treatment and school location on the mean reading comprehension achievement scores of students is therefore rejected.

Furthermore, the interaction or combined effect of treatment and school location on students' achievement mean scores in reading comprehension is graphically illustrated in figure 4 below:

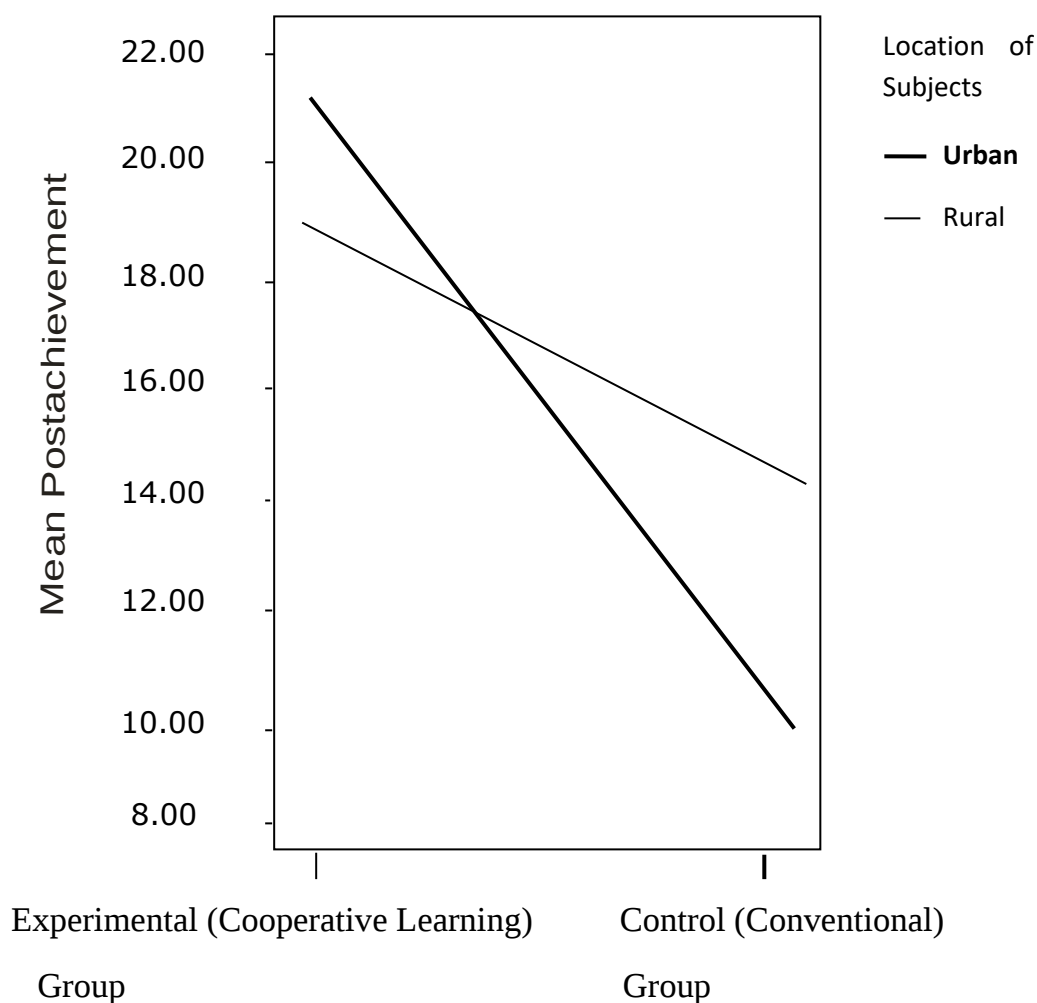


Figure 4

Treatment and Location Interaction on Students' Achievement in Reading Comprehension as Measured by Post test Mean Scores.

From figure 4 above, it can be seen that rural students in the control group performed better in post test with a mean score of 15 than urban students in the control group who had a post test mean score of 10. However, urban students exposed to the cooperative learning strategy performed better in post test with a mean score of 21 than rural students exposed to the cooperative learning strategy who had a post test mean score of 19. It is therefore clear from the illustration that there was a significant interaction or combined effect of treatment and school location on the reading comprehension achievement scores of students. This was because while rural

students benefitted more from being taught using the conventional method of instruction, urban students on the other hand gained more as result of being exposed to the cooperative learning strategy. The graphic illustration in figure 4 above is therefore consistent with the findings made in the testing of hypothesis 5.

Research Question Six

What is the interaction effect of treatment and school location on the self concept mean scores of students?

Table 8: Interaction Effect of Treatment and School Location on Self concept Mean Scores of Students

Treatment Groups	Location of Subjects	Mean	Standard Deviation	N
Experimental (Cooperative learning) Group	Urban	49.48	4.50	33
	Rural	47.12	5.12	21
Control (Conventional) Group	Urban	41.08	4.61	38
	Rural	41.45	5.26	13

Table 8 above shows that urban students exposed to cooperative learning strategy had a self concept post test mean score of 49.48 and standard deviation of 4.50 as against urban students taught using the conventional method of instruction that had a self concept post test mean score of 41.08 and standard deviation of 4.61. On the other hand, rural students exposed to cooperative learning had a self concept post test mean score of 47.12 and standard deviation of 5.12 as against a self concept post test mean score of 41.45 and standard deviation of 5.26 by rural students taught using the conventional method of instruction. Thus, since both urban and rural students exposed to cooperative learning gained more in self concept mean scores than urban and rural students taught using the conventional method of instruction, it can be

deduced that there was no interaction effect of treatment and school location on the self concept mean scores of students.

A corresponding hypothesis raised to further address research question five is:

HO₆: There is no significant interaction effect of treatment and school location on the self concept mean scores of students.

Results in Table 4 indicate that there was no significant interaction effect of treatment and school location on the self concept means scores of students. This is because the F-value of 1.496 in respect of treatment and location is shown not to be significant at .224 having been tested at 0.05 levels of significance. Consequently, the null hypothesis which states that, there is no significant interaction effect of treatment and school location on the mean self concept scores of students is not rejected.

Summary of Findings

On the basis of results presented in this chapter, the study reveals the following:

1. Students exposed to cooperative learning performed significantly higher in reading comprehension achievement mean scores than students taught using the conventional method of instruction.
2. Students exposed to cooperative learning had their self concept more significantly enhanced than those taught using the conventional method of instruction.
3. School location had no significant effect on the reading comprehension achievement mean scores of students exposed to cooperative learning than on those taught using the conventional method of instruction.
4. School location had no significant effect on the self concept mean scores of students exposed to cooperative learning than on those taught using the conventional method of instruction.

5. There was significant interaction effect of treatment and school location on the reading comprehension achievement mean scores of students.
6. There was no significant interaction effect of treatment and school location on the self concept mean scores of students.

CHAPTER FIVE

DISCUSSION OF RESULTS, CONCLUSIONS, RECOMMENDATIONS AND SUMMARY

This chapter focuses on discussion of major findings of the study, their educational implications and recommendations. Other aspects of the study treated in this chapter are conclusions, suggestions for further studies and summary of the study.

Discussion of Results

In line with the research questions and hypotheses raised in this study, the findings made in the preceding chapter are discussed in the following order:

1. Effect of the cooperative learning strategy on students' achievement in reading comprehension.
2. Effect of the cooperative learning strategy on students' self concept
3. Effect of the cooperative learning strategy on students' achievement in reading comprehension as a result of school location
4. Effect of the cooperative learning strategy on students' self concept as a result of school location
5. Interaction effect of treatment and school location on students' achievement in reading comprehension.
6. Interaction effect of treatment and school location on students' self concept.

Effect of the Cooperative Learning Strategy on Students' Achievement in Reading Comprehension

The results of the study reveal that the use of the cooperative learning strategy had a significant effect on students' achievement in reading comprehension. The group of students exposed to the cooperative learning strategy performed significantly better than students in the control group who were taught using the conventional method of instruction.

The findings of the study is consistent with several research findings which showed that students exposed to the cooperative learning strategy performed significantly better than those taught using the conventional method of instruction. Studies carried out by Zisk (2011), Ozsoy and Yildiz (2004), Chianson, Kurumeh and Obida (2011), Ghait (2012) and Slavin (1991a) agree with the findings of the study that the cooperative learning strategy is far more effective as a method of instruction than the conventional method of instruction. However, findings by Hainze and Berger (1997), and Abu and Flowers did not find significant difference in the performance between students exposed to cooperative learning and those taught using the conventional method of instruction. It is the researcher's considered opinion that extraneous variables such as teacher variability and inadequate sensitization of teachers and students on correct usage of cooperative learning, among others, may have accounted for this outcome.

It is evident from the findings of this study and other research findings that students exposed to the cooperative learning strategy performed significantly better than those taught using the conventional method of instruction. Slavin (1991a) found

out that in most studies carried out by him students in the cooperative learning group performed significantly better than those taught using the conventional method of instruction, while in a few of the studies no differences were found in the performance of students in the experimental and control groups. In contrast to the findings of this study, Slavin found out that only one showed that students in the control group performed better than those in the experimental group.

Effect of the Cooperative Learning Strategy on Students' Self concept

Results of the study presented in Tables 3 and 4 indicate that students exposed to the cooperative learning strategy performed significantly better in self concept scores than those taught using the conventional method of instruction.

This finding concur with studies conducted by Zisk (2011), and Hainze & Berger (2007) who found out that students exposed to the cooperative learning strategy developed a greater sense of academic self concept than students taught using the conventional method of instruction. In line with the finding of the study, Kose, Abdurrahman, Ergun and Gezer (2010) observed that, in cooperative learning, students improve interpersonal skills and develop better self concept. The inculcating in students in the experimental group of the five components of positive interdependence, equal participation, individual and group accountability, simultaneous interaction and group processing, which emphasise social skills and team work, undoubtedly helped to enhance the self concept of students in the treatment group.

Effect of the Cooperative Learning Strategy on Students' Achievement in Reading Comprehension as a Result of School Location

Results in Table 2 indicate that there was no significant differences in the reading comprehension mean scores of urban and rural students exposed to cooperative learning strategy and those taught using the conventional method of instruction. Although significant differences were not found, findings in Table 5 showed that urban and rural students exposed to the cooperative learning strategy had higher reading comprehension mean scores than urban and rural students taught using the conventional method of instruction. Further findings in Table 5 showed that urban students gained more from being exposed to cooperative learning than rural students exposed to the same strategy. While this study did not find significant differences as a result of location, Chianson (2012) found out that urban student exposed to the cooperative learning strategy benefitted significantly more than rural students exposed to the same strategy. However, in contrast to the findings of Chianson (2010), Topping et al (2013) found out that rural students benefitted more from exposure to the cooperative learning strategy than urban students exposed to the same strategy.

A number of studies (William, 2005; Suzasne & Lauren, 2012) had attributed the variations in performance to factors such as parental socio-economic status, better funding and quality of teachers, among others, which were more readily available in urban schools and lamentably lacking in rural schools than to method of instruction. It is the researcher's contention that more studies need to be carried out to further ascertain the effect of location on students' performance as a result of exposure to the cooperative learning strategy.

Effect of the Cooperative Learning Strategy on Students' Self concept as a Result of School Location.

Results in Table 4 and 6 reveal that the variable of location had no significant effect on the self concept mean scores of students exposed to the cooperative learning strategy and those taught using the conventional method of instruction. Although no significant differences were found, findings in Table 6 showed that both urban and rural students exposed to the cooperative learning strategy had more gains in self concept mean scores than urban and rural students exposed to the conventional method of instruction. On the whole, the findings of this study is consistent with the findings of Topping et al (2013) who did not find significant differences in self concept mean scores between urban and rural students exposed to the cooperative learning strategy.

Interaction Effect of Treatment and School Location on Students' Achievement in Reading Comprehension

The findings of the study, presented in Table 2 and graphically represented in Figure 4, indicate there was significant interaction effect of treatment and location on students' achievement in reading comprehension. This is consistent with the findings of Umo (2006) which showed that the interaction effect of treatment and location is significant in students' academic performance. However, the findings of this study further showed that urban students exposed to cooperative learning benefitted more than rural students as a result of the combined effect of treatment and school location.

Interaction Effect of Treatment and School Location on Students' Self Concept

Findings in Table 4 indicate that there was no significant interaction effect of treatment and location on students' achievement in self concept. This finding,

however, contrasted with the finding of Topping et al (2013) which found significant interaction effect of treatment and school location on students' self concept.

Conclusions

From the findings and discussions, the following conclusions are made:

1. The cooperative learning strategy was found to be effective in students' achievement in reading comprehension.
2. The cooperative learning strategy was found to be effectual in the enhancing of students' self concept.
3. The cooperative learning strategy was found to have had an effect on students' achievement in reading comprehension in both urban and rural schools.
4. The cooperative learning strategy was found to have had an effect in the enhancing of the self concept of students' in both urban and rural schools.
5. The interaction or combined effect of treatment and school location showed the that cooperative learning strategy was effectual on students' achievement in reading comprehension
6. The combined or interaction effect of treatment and school location had an effect on students' self concept.

Educational Implications

The findings of this study can be said to hold enormous educational implications for stakeholders in the education industry. They include teachers, school proprietors, curriculum developers and students. Others are textbook writers, institutions and school counsellors. The findings of this study have empirically demonstrated that the cooperative learning strategy can be a veritable tool for

enhancing students' self concept and improving achievement in reading comprehension.

Fundamentally, the findings of the study make it incumbent for curriculum developers to revisit primary, secondary and teacher education curricular, as presently constituted, with a view to modifying them through inclusion of the cooperative learning strategy in the curricular. To ensure its success, courses in the cooperative learning strategy should be urgently incorporated in the curriculum of teacher education. This is essential since no education can rise above the quality of its teachers.

There is also the need to sensitize serving teachers to the use of the cooperative learning strategy as part of on - the - job training. To this end, various ministries of education and departments of education should organise regular and periodic seminars and conferences where serving teachers can be trained and retrained on the need for correct and regular use of the cooperative learning strategy.

In the light of this study's findings, textbook writers in all subjects should redesign existing texts to incorporate the cooperative learning strategy. Teachers should also ensure that practical activities in the sciences and other forms of activities are held using appropriate forms of the cooperative learning strategy. It is also the researcher's considered opinion that students and school counsellors can find the cooperative strategy a veritable tool for mitigating school based interpersonal social problems such as bullying. This can be made possible by way of instilling in students the components of cooperative learning such as positive interdependence, equal

participation, individual and group activity, simultaneous interaction and group processing. For teachers and students, the cooperative learning strategy could serve as a window of opportunity for low achieving students and students with learning difficulties to remedy their deficiencies by way of learning cooperatively from the more able members of the class.

Recommendations

In the light of the study's educational implications and results of findings, the following suggestions are proposed:

1. The Federal and State Ministries of Education should organise seminars and conferences for teachers, counsellors, school proprietors and other caregivers to create sensitization on the effectiveness of the cooperative learning strategy on the teaching – learning process. To ensure that the cooperative learning strategy is used regularly and correctly, periodic and regular training and retraining of teachers can be organised.
2. Professional bodies such as the Nigerian Society of Educational Psychologists (NISEP), Counselling Association of Nigeria (CASSON), Science Teachers' Association of Nigeria (STAN), and Curriculum Organisation of Nigeria (CON), among other professional bodies, should organise conferences on the cooperative learning strategy with a view to engendering intellectual discourses on the strategy. This will afford educational researchers the opportunity to evolve better, newer and more effective ways of helping students to learn cooperatively.

3. Teacher education should be modified to incorporate the cooperative learning strategy. This should be done by way of redesigning all subject methodology contents in faculties of education and colleges of education.

Limitations of the Study

It is evident that the study made use of a small sample size for the study, lacked randomization in the choice of respondents, and made use of only Junior Secondary School¹¹ students. It is the researcher's considered opinion that these factors, among others, could slightly have affected the findings made.

Suggestions for Further Research

Based on the findings of the study, the following are recommended for further research:

1. The present study investigated the effect of the cooperative learning strategy on students' self concept and achievement in reading comprehension in which location was a moderating variable. Further studies can be carried on effect of cooperative learning on students' self concept and achievement in reading comprehension in which ability grouping would be the moderating variable.
2. A study could also be carried out on the effect of the cooperative learning strategy on the academic achievement of students with learning disability.
3. A study could also be carried out on how the cooperative learning strategy could be used to mitigate school - based interpersonal social problems such as bullying.
4. A major finding of this study showed that urban students exposed to the cooperative learning strategy performed better than rural students exposed to

the same strategy, while some of the reviewed empirical studies found the contrary. Would- be researchers can replicate the study on effect of cooperative learning on students' achievement with location being the moderating variable.

5. This study has established the fact there is a dearth of studies on the effect of the cooperative learning strategy in the arts and humanities. Further studies could therefore be carried out on the effect of cooperative learning on students' achievement in subjects such as History, Geography, Government and Economics, among others.

Summary of the Study

Reading comprehension is the reader's ability to recognise printed words and make meaning intended by the writer. Its importance in students' academic achievement, economic, social and emotional well being cannot be overemphasised. However, due to less obvious reasons, students read but do not comprehend what they read. The dire consequences of this worrisome trend include negative self concept, poor academic achievement, frustration and alienation. To address this hugely unsettling development, this study sought to investigate the effect of the cooperative learning strategy on students' self concept and achievement in reading comprehension.

The following research questions guided the study:

1. What are the differences in the reading comprehension achievement mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction?

2. What are the differences in the self concept mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction?
3. What is the effect of school location on the reading comprehension achievement mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction?
4. What is the effect of school location on the self concept mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction?
5. What is the interaction effect of treatment and school location on the reading comprehension achievement mean scores of students?
6. What is the interaction effect of treatment and school location on the self concept mean scores of students?

The following hypotheses were formulated for this study and tested at 0.05 degree of significance:

1. The reading comprehension achievement mean scores of students exposed to co-operative learning will not significantly differ from those taught using conventional method of instruction.
2. The self concept mean scores of students exposed to co-operative learning will not significantly differ from those taught using the conventional method of instruction.

3. There is no significant difference in the reading comprehension achievement mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction as a result of school location.
4. There is no significant difference in the self concept mean scores of students exposed to cooperative learning and those taught using the conventional method of instruction as a result of school location.
5. There is no significant interaction effect of treatment and school location on the reading comprehension achievement mean scores of students.
6. There is no significant interaction effect of treatment and school location on the self concept mean scores of students.

The study reviewed various works of literature which showed that the cooperative learning strategy was far more effective than the conventional method of instruction in enhancing students' academic achievement. A major gap in the works reviewed, however, showed that the effect of the cooperative learning strategy on students' self concept and achievement in reading comprehension in Education zone B of Benue State has not been investigated. A few related studies so far carried out in the state and the zone in particular showed the misuse of the cooperative learning strategy and the near total disregard for detailed experimental procedure by researchers. To fill these apparent gaps, this study sought to investigate the effect of the cooperative learning approach of the Student Teams Achievement Divisions (STAD) on students' self concept and achievement in reading comprehension in Education Zone B of Benue State. The non – equivalent control group pre test- post test design was used. The study was carried out in Education Zone B (North West) of Benue State situated

in the North Central geo-political region of Nigeria. A total of 14, 608 Junior Secondary School 11 students were used for the study, out of which 105 students constituted the sample of study. Through simple randomization of schools on the basis of location, 2 urban and 2 rural Government schools were selected. Out of the 105 students used as sample of study, 54 and 51 students were assigned to the experimental and control groups in that order. In all, four research assistants were used; two research assistant were assigned to teach the experimental group and two to teach the control group.

Two research instruments were developed for the study. They are the Reading Comprehension Achievement Test (RCAT) and the Students' Self Concept Scale (SSCN). Both instruments were validated by experts and trial tested using appropriate statistical methods.

To test for the internal consistency of the Reading Comprehension Achievement Test (RCAT), a trial testing was carried using 30 JSS 11 students from a Secondary School within Makurdi metropolis other than the schools sampled for the study. The 20 students were administered a test using the RCAT and retested after two weeks. The results obtained were subjected to internal consistency reliability coefficient testing using Kuder Richardson 20 (KR-20). The calculated KR-20 estimate value of 0.77 was obtained (see Appendix IV); while the test for stability of the same instrument using Pearson Product Moment Correlation Coefficient yielded a Pearson r value of 0.55 Hence the Reading Comprehension Achievement Test (RCAT) can be said to be of high reliability content. The test for stability of the Students' Self-Concept Scale (SSCS), using a test – retest was calculated using Pearson Product

Moment Correlation Coefficient, which yielded a Pearson r value of 0.53 (see Appendix VI). To also test the SSCS for internal consistency, a Cronbach's alpha estimate value of 0.76 was obtained.

A number of extraneous variables that were capable of producing adverse effects on the result of the study were identified and adequate procedures for controlling them taken, accordingly. Some included the use of Analysis of Covariance (ANCOVA) and the adequate training of research assistants, and students. The research questions raised were analysed using mean scores and standard deviations, while ANCOVA was used to test the hypotheses formulated at 0.05 level of significance.

Results of the study showed that:

1. Students exposed to the cooperative learning strategy performed significantly better in reading comprehension than those taught using the conventional method of instruction.
2. Students exposed to the cooperative learning strategy had their self concept significantly more enhanced than those taught using the conventional method of instruction.
3. Urban and rural students exposed to the cooperative learning strategy performed better in reading comprehension than urban and rural students taught using the conventional method of instruction.

4. Urban and rural students exposed to the cooperative learning strategy had their self concept more enhanced than urban and rural students taught using the conventional method of instruction.
5. There was significant interaction or combined effect of treatment and school location on students' achievement in reading comprehension.
6. There was no significant interaction or combined effect of treatment and school location on students' self concept.

Finally, the findings of the study were carefully and extensively discussed; various educational implications and recommendations highlighted. Suggestions for further study, limitations and summary of the study were also made.

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Appendix 1

READING COMPREHENSION ACHIEVEMENT TEST (RCAT)

Section A: Multiple Choice Questions.

Encircle the correct answer from the options given.

1. A social group can be defined as
 - (a) a collection of people who interact with one another and work towards common interests and goals.
 - (b) a collection of young people agitating for their rights
 - (c) a collection of people at a social gathering or function.
 - (d) a collection of people in a long queue waiting to cast their votes.
2. The basis of a society is in its
 - (a) traditional rulers
 - (b) university Students
 - (c) social groups
 - (d) agricultural resources
3. The two types of social groups are known as
 - (a) Small and big social groups
 - (b) Primary and secondary social groups
 - (c) Secondary and university social groups
 - (d) Poor and rich social groups
4. The best example of a primary social group is the ----
 - (a) the church
 - (b) the family
 - (c) the Primary School
 - (d) none of the above.
5. All of these are social groups EXCEPT

- (a) Classmates
 - (b) Member of the same political party
 - (c) Workers in a trade union
 - (d) Hyenas in a clan (group)
6. One of these is a good example of a secondary social group.
- (a) Membership of a family
 - (b) Membership of a political party
 - (c) Membership of a School Class
 - (d) Membership of a village community meeting.
7. Group behaviour are manifested in two ways known as
- (a) Short term and long term services
 - (b) Mass action and community services
 - (c) Financial and non-financial services
 - (d) Good and bad services
8. When people come together in large numbers to show or register their displeasure against, or their support for any issue or policy of government, it is referred to as
- (a) Morbidity
 - (b) Rally
 - (c) Mass action
 - (d) Service
9. The Aba Women Riot of 1929 was an example of
- (a) Morbidity
 - (b) Rally
 - (c) Mass action

- (d) Service
10. A mass action can also take the form of a protest by adherents of a religious group when they feel that some other group ridicule or blaspheme their religious beliefs. TRUE / FALSE.
11. Examples of community service that can be performed by both primary and secondary groups are, EXCEPT
- (a) constructing bridges
 - (b) building community roads
 - (c) building markets
 - (d) being a member of a terrorist organisation
12. One of these was an example of mass action
- (a) Students' rejection of the 1961 Anglo-Nigerian Defence pact
 - (b) Victory by the super Eagles in the 1994 African Nations' Cup finals in Tunis
 - (c) The huge turnout by Nigerians in the 2011 general elections
 - (d) A huge turnout in a Polio vaccination exercise
13. A popular mass action that took place all over the nation in January 2012 was against
- a) inconsistencies in the electoral law
 - b) hike in the prices of fuel
 - c) falling standard of education
 - d) the activities of Boko Haram in the North.

14. The three forms of marriage are, except
- (a) religious marriage .
 - (b) traditional marriage.
 - (c) customary marriage.
 - (d) co-habitation.
15. In Islamic marriage some conditions must be fulfilled before the marriage can be approved; they include the following, EXCEPT
- (a) the two partners must be mature enough
 - (b) a bride price must be paid by the man
 - (c) there must be people to witness the marriage
 - (d) the marriage must be held in a mosque
16. Ordinance marriage can be arranged for Christians, Muslims or believers in other religious practices. TRUE/FALSE
17. The customary form of marriage is also known as
- (a) Christian marriage
 - (b) Islamic marriage
 - (c) Traditional marriage
 - (d) Ordinance marriage
18. One of the purposes of marriage is for the procreation of children that would continue to sustain human society. TRUE/FALSE
19. One way to make one's marriage successful is by listening to the advice of experienced persons. TRUE/FALSE.

20. Only one of these correctly defines the term *culture*
- a) The total way of life of a given people
 - b) The way and manner a particular group of people dress
 - c) Any musical group based in Makurdi
 - d) Any language spoken in Nigeria
21. All of these are qualities of clean water except
- (a) Colourlessness
 - (b) Odourlessness
 - (c) Tastlessness
 - (d) Hardness
22. Under whose government was the *Anglo- Nigeria Pact* of 1961 initiated?
- a) Sir Abubakar Tafawa
 - b) Alhaji Shehu Shagari
 - c) General Yakubu Gowon
 - d) General Ibrahim Babangida
23. Water Pollution can correctly be defined as
- a) Discharge of harmful waste substances into a body of water
 - b) Boiling of water before drinking
 - c) Treating water before it is used for domestic uses
 - d) Using clean water to wash vegetables

Section B: Matching type questions

Instructions: Use a straight line to correctly match any two options

	A	B
24.	A major effect of water pollution	Intimate relationship
25.	A characteristic of a primary social group	Fatiha
26.	A major cause of water pollution	Human faeces
27.	A characteristic of a secondary group behaviour	Physiological fitness Health hazard
28.	Water pollution would be controlled by	Proper discharge of both domestic and industrial waste substances
29.	All persons present at an Islamic marriage are expected to recite the	
30.	An essential condition for marriage	Inter-personal relationship

Appendix 11

Students' Self- Concept Scale

1.	On the whole, I am satisfied with myself.	SA	A	D	SD
2.	I feel that I do not perform well at school.	SA	A	D	SD
3.	The opinions of my teachers concerning my ability make me feel unhappy.	SA	A	D	SD
4.	The opinions of my parents about me make me happy	SA	A	D	SD
5.	All in all, people around me are happy with my ability.	SA	A	D	SD
6.	At times, I think I am no good at all	SA	A	D	SD
7.	I feel that I have a number of good qualities	SA	A	D	SD
8.	I am able to do things as well as most other people.	SA	A	D	SD
9.	I feel I do not have much to be proud of.	SA	A	D	SD
10.	I certainly feel useless at times.	SA	A	D	SD
11.	I feel that I'm a person of worth, at least on an equal level with others.	SA	A	D	SD
12.	I wish I could have more respect for myself.	SA	A	D	SD
13.	All in all, I am inclined to feel that I am a failure.	SA	A	D	SD
14.	I take a positive attitude toward myself.	SA	A	D	SD
15.	At times I feel useless as a result of the attitude of my mates towards me.	SA	A	D	SD

Appendix III

Test Blueprint for Developing Reading Comprehension Achievement Test (RCAT)

Content	Lower Order Questions	Higher order Questions	Total
Social Group	5	4	9
Water Pollution	3	2	5
Marriage	5	4	9
Group Behaviour	4	3	7
Total	17	13	30

Appendix 1V

INTERNAL CONSISTENCY RELIABILITY ESTIMATE OF READING COMPREHENSION ACHIEVEMENT TEST USING K-R 20 FORMULA

$$K - R \ 20 \ formula = r_{xx} = \frac{n}{n-1} \left[\frac{1 - \sum pq}{Sx^2} \right]$$

Where n = Number of items in a test

p = Proportion of testees who answered an item correctly (for example, if an item 1, 15 of 30 testees answered correctly, p for this item would be $15/30 = 0.50$)

q = Proportion of people or testees who answered an item incorrectly ($q = 1 - p$)

pq = Variance of a single item scored dichotomously i.e right or wrong

Σ = Summation sign indicating that pq is summed over all items

Sx^2 = Variance of the total test

Here $n = 30$

Calculated $\sum pq = > .94$

„ $Sx^2 = 29.96$

$$r_{xx} = \frac{30}{30-1} = \left[1 - \frac{7.94}{29.96} \right]$$

$$= 1.04 \times 1 - .27$$

$$= 1.04 \times 0.74$$

$$r_{xx} = \mathbf{0.77}$$

Appendix V

Correlations Analysis- Test Retest Analysis for Reading Comprehension Test

Correlations Analysis -Students' Self- Concept Scale (SSCS)

Reliability Analysis – Students' Self Concept Scale

Validation of RCAT

Appendix IX

Validation of SSCS

Population of the Study

APPENDIX X1

Lesson Plans for the Experimental Group

1

Name of School -

Date -

Class - JSS II

Duration - 40 Minutes

Sex - Mixed

Average Age - 12 and above

Subject - Reading Comprehension

Topic - Social Group

Behavioural Objectives - By the end of the lesson students should be able to:

- i) Pronounce and define some unfamiliar words used in text
- ii) Define social group
- i) Mention the two major types of social groups
- ii) Discuss the characteristics of the two major types of social group.

Teaching Strategies - i) Students' Test Achievement Division (STAD) of
cooperative learning

Instructional Materials – i) A chart depicting social group

Previous Knowledge - Students have learnt about man and his social

environment.

Introduction - Teacher revises the previous lesson, asking pupils the following questions:

- i) Mention some of the features that make up the physical environment of man
- ii) Mention some of the factors of the social environment.

Teacher and students identify unfamiliar words used in the text. Teacher leads students in correct pronunciation of said words followed by their definitions using students' dictionaries..

Presentation Step I – Teacher places the chart depicting the social group on the blackboard and defines social group, thus:

A social group is a collection of people who interact with one another, and work towards common interests and goals.

Teacher to stress that an entire society is made of social groups, and that the basis of a society is in the social group.

Presentation Step II – Using the instructional chart, students are allowed to identify the two types of social groups:

- i) Primary social group

ii) Secondary social group

Presentation Step III – Using the instructional chart, teacher and students to

read and discuss the characteristics of primary and social group, thus:

- i) The best example of a primary social group is the family which may include, extended or compound family. Other examples of the primary social groups are age groups, and play mates
- ii) Members of the social group know each other very well, relate well and communicate freely with one another.
- iii) They have interest in relationship.
- iv) Membership is not large so members know their leaders easily.

Presentation Step iv – Using the instructional chart, teacher and students to

discuss the characteristics of secondary social group thus:

- i) Membership is usually very large
- ii) Some examples are trade union group membership and membership of apolitical party.
- iii) They are usually not related by blood.
- iv) Their relationship is usually interpersonal
- v) Members come from different geographical locations
- vi) These various characteristics affect group behaviour.

Presentation Step v – Students split into cooperative learning teams of five

students each and given sub topics which they would cooperatively read and discuss from text.

- i) Sub topic 1 – Meaning and types of social groups.
- ii) Sub topic 2 – Characteristics of primary social group.
- iii) Sub topic – Characteristics of secondary social group

Evaluation – The teacher evaluates the lesson by way of asking the students the following questions:

- i) What is social group?
- ii) Mention the two major types of social groups.
- iii) Mention and discuss any two characteristics of the primary social group
- iv) Mention and discuss any two characteristics of the secondary group

Summary/Conclusion – The teacher summarizes the lesson by highlighting

the various sub topics of: meaning and types of social group, characteristics of primary social group, and characteristics of secondary social group.

Lesson plans for the Experimental Group

2

Name of School	-	
Date	-	
Class	-	JSS II
Number of Student	-	40 Minutes
Sex	-	Mixed
Average Age	-	12 and above
Subject	-	Reading Comprehension
Topic	-	Group Behaviour
Behavioural Objectives	-	By the end of the lesson pupils should be able to:
		i) Pronounce and define unfamiliar words used in text ii) Define group behaviour iii) Mention and discuss the two types of group behaviour iv) Discuss the benefits of group behaviour
Teaching Strategies		i) Students' Test Achievement Division (STAD) of cooperative learning

Instructional Materials – i) Pictures of various forms of community action

ii) Pictures of various forms of community services

Previous Knowledge – Students have learnt about primary and secondary social groups

Introduction - Teacher revises the previous lesson, asking the following

questions:

- 1 Define social group
- 2 Mention the two types of social groups
- 3 Mention two characteristics each of the primary and secondary social groups.

Teacher and students identify unfamiliar words used in the text. Teacher leads students in correct pronunciation of said words followed by their definitions using students' dictionaries

Presentation Step 1 – Teacher fixes on the board a picture of people undertaking a monthly sanitation exercise and defines group behaviour, thus:

When two or more persons come together in a group and act in the same way, it is called group behaviour. Group behaviour is sometimes called collective action or collective behaviour.

Students should be allowed to cite examples of group behaviour, for example cooking a meal for the family, among others

Presentation Step 11 - Teacher identifies the two types of group behaviour:

- (1) Mass action: This takes place when more than two people come together in large number to show displeasure or support for a policy being undertaken by the community, local, local, state or federal government. Examples of mass action include the Aba women riot of 1929, and the rejection by Nigeria students of the Anglo- Defence pact in 1961
- (2) Community service – This is done by both the primary and secondary social groups by way of embarking on community services (free of charge) with the sole aim of improving the community. Examples of community services include building of community bridges, building markets and building roads, among others

Presentation Step iii - Teacher and students to read and discuss the benefits of group behaviour, thus:

A major benefit of group behaviour, when properly directed, is that it can ensure the right change in lives of people. For example, when the Nigerian students protested against the Anglo- Nigerian Pact in 1961, the government listened and pulled out of the pact to prevent further control of Nigeria by Britain. A similar example was the Aba women riot of 1929 which till today has seen women free from paying of poll tax.

Presentation Step iv- Students split into teams to cooperatively read and discuss the following topics:

- 1) Sub topic 1- Definition of group behaviour and identifying the two types of group behaviour
- 2) Sub topic 2- Discussing the two (2) types of group behaviour
- 3) Sub topic 3- Discussing the benefits of group behaviour with specific examples.

Evaluation- Students' level of comprehension is evaluated by teacher using the following questions:

- 1) What is group behaviour?
- 2) Mention the types of group behaviour.
- 3) Discuss some of the benefits of group behaviour- cite some specific examples.

Summary/ Conclusion- Teacher summarizes the lesson by highlighting the various sub- topics: definition of group behaviour, types of group behaviour, and discussion of the benefits of group behaviour.

Lesson Plan for the Experimental Group

3

Name of School	-	
Date	-	
Class	-	JSS II
Number of Student	-	40 Minutes
Sex	-	Mixed
Average Age	-	12 and above
Subject	-	Reading Comprehension
Topic	-	Marriage

Behavioural Objectives - By the end of the lesson students should be able to:

- i) Pronounce and define some unfamiliar words used in text
- ii) Define marriage
- iii) Mention the three(3) forms of marriage
- iv) Discuss the three(3) forms of marriage

Teaching Strategies -i) Students' Test Achievement Division (STAD) of

cooperative learning

Instructional Materials – i) A picture depicting Christian marriage

ii) A picture depicting ordinance marriage

iii) A picture depicting Islamic marriage

iv) A picture depicting traditional marriage

Previous Knowledge - Students have learnt about culture and the various aspects of culture.

Introduction - Teacher revises the previous lesson, asking pupils the following question:

- i) What is culture?
- ii) Mention the various aspects of culture.

Teacher and students identify unfamiliar words used in the text. Teacher leads students in correct pronunciation of said words followed by their definitions using students' dictionaries

Presentation Step I – Teacher fixes a picture of a wed couple and, defines marriage thus:

Marriage is the joining of a man and woman as husband and wife to start a new family.

Presentation Step II – Students to mention the different forms of marriage that there are. Teacher and students to read and discuss the different forms of marriage, thus:

1. Religious marriage

a) Christian marriage – The ceremony takes place in church. The Christian marriage does not allow a man to have more than one wife. The ceremony is conducted by a clergyman.

b) Islamic marriage – On the appointed day for the marriage, the bridegroom, accompanied by some friends, goes to the place agreed upon. Two trustworthy witnesses must be present. All persons present must recite the *fatiha*. Normally four conditions must be fulfilled before the marriage can be approved. They are:

- i. The bride must have a guardian who will arrange the marriage on her behalf
- ii. A bride- price must be paid by the man
- iii. There must be people to witness the marriage agreement
- iv. The two partners must be old enough for marriage

2. Ordinance marriage - This type of marriage takes place at a marriage registry or court. Muslims, Christians and traditional worshippers may prefer ordinance marriage to other forms of marriage. In ordinance marriage, like the Christian marriage, the man is not allowed to have more than one wife.

Presentation Step iii – Teacher and students to read and discuss customary marriage, thus:

This form of marriage is also called traditional marriage. Elders and relatives in the family usually conduct the marriage. IT involves a third party called the-go-between. Customary marriage also involves the paying of a dowry or bride-price (in kind or in cash). The marriage is concluded with ceremonies which members of the community would see or witness.

Presentation Step iv – Students split into teams to cooperatively read and discuss the following sub topics:

- i) Sub topic 1 – Discuss Religious marriage
- ii) Sub topic 2 – Discuss ordinance marriage.
- iii) Sub topic – Discuss customary marriage

Evaluation – The teacher evaluates the lesson by way of asking students the following questions:

1. What is marriage?
2. Mention the three forms of marriage.
3. Briefly discuss any of the three forms of marriage.

Summary/Conclusion – The teacher summarizes the lesson by highlighting the various sub topics of the lesson: definition of marriage, and the three forms of marriage.

Lesson Plan for the Experimental Group

4

Name of School	-	
Date	-	
Class	-	JSS II
Duration	-	40 Minutes
Sex	-	Mixed
Average Age	-	12 and above
Subject	-	Reading Comprehension
Topic	-	Purpose of marriage and conditions for Marriage

Behavioural Objectives - By the end of the lesson students should be able to:

- i) Pronounce and define some unfamiliar words used in the text
- ii) Mention and discuss the purpose of marriage
- iii) Mention the various conditions for marriage
- iv) Discuss the different conditions for marriage

Teaching Strategies - Students' Test Achievement Division (STAD) of
cooperative learning

Instructional Materials – i) A picture of a wed couple

- ii) A picture of an Efik damsel in the fattening room

Previous Knowledge - Students have learnt the definition of marriage and the various forms of marriage.

Introduction - Teacher revises the previous lesson, asking pupils the questions:

- i) What is marriage?
- ii) Mention the three forms of marriage.
- iii) Briefly discuss the customary form of marriage

Teacher and students identify unfamiliar words used in the text. Teacher leads students in correct pronunciation of said words followed by their definitions using students' dictionaries

Presentation Step I – Teacher fixes a picture of a wed couple and, with students read and discuss the purpose of marriage thus:

- i) For the purpose of mutual benefit of society so that one can get help and comfort from the other
- ii) For remedy against sin.
- iii) For the procreation of children that would continue to sustain human society

Presentation Step II – Teacher fixes on the board a picture of picture of an Efik girl in the fattening room, and discusses the conditions for marriage, thus:

- i) Physiological fitness- When a young person reaches puberty, nature confirms that he or she is becoming or actually ready for marriage. In the culture of the Efik or Ibibio, a young girl is prepared (physiological fitness) for marriage in the fattening room (Nkuho). Among the fulanis a young man shows his physiological fitness for marriage during the Sharo festival. Only young men who are able to endure the Sharo are considered physiologically fit to marry
- ii) Psychological readiness- Both the man and the woman willing to marry must show themselves to be ready for marriage. At puberty, the boy and girl show signs of being in love with someone in various ways.

Presentation Step iii – Teacher and students to further read and discuss the other conditions for marriage, thus:

- i) Social Conditions- The man and the woman getting married must be stable socially. They must have education and have skills at doing what provides their means of livelihood. In the end family background, respect among peer group, education and skills add up to make one stable socially.
- ii) Financial readiness- People who prepare to be husband and wife have responsibilities to shoulder. The husband must have a job or means of raising money for the family

Presentation Step iv – Students split into teams to cooperatively read and discuss the following sub topics.

- i) Sub topic 1 – Discuss the purpose of marriage
- v) Sub topic 2 – Discuss physiological fitness and psychological readiness as conditions for marriage
- ii) Sub topic 3 – Discuss social stability and financial readiness as conditions for marriage

Evaluation – The teacher evaluates the lesson by way of asking students the following questions:

1. Identify any two reasons why you think marriage is important.
2. Carefully discuss physiological readiness as a condition for marriage
3. Discuss financial readiness as a condition for marriage

Summary/Conclusion – The teacher summarizes the lesson by highlighting the various sub topics that were treated: purpose of marriage and the different conditions for marriage .

Lesson Plan for the Experimental Group

5

Name of School	-	
Date	-	
Class	-	JSS II
Duration	-	40 Minutes
Sex	-	Mixed
Average Age	-	12 and above
Subject	-	Reading Comprehension
Topic	-	Water Pollution
Behavioural Objectives	- By the end of the lesson students should be able to:	
	i) Pronounce and define unfamiliar words used in the text	
	ii) Define water pollution	
	iii) Mention the various causes of water pollution	
	iv) Identify the various causes of water pollution	
	vi) Discuss ways of controlling water pollution	
Teaching Strategies	-	The teacher uses:
	1) Students' Test Achievement Division (STAD) of	

Cooperative learning

Instructional Materials – i) A picture depicting the various ways water can be polluted

ii) Some pictures depicting some health conditions caused by polluted water

Previous knowledge – Students have learnt about types of diseases and how to prevent them

Introduction - Teacher revises the previous lesson, asking pupils the following questions:

1. Mention any three types of disease that you know
2. Identify the modes of transmission of diseases
3. Mention and briefly discuss the various ways that diseases can be prevented

Teacher and students identify unfamiliar words used in the text. Teacher leads students in correct pronunciation of said words followed by their definitions using students' dictionaries.

Presentation Step I – Teacher fixes a picture showing ways by which is polluted and defines water pollution as follows:

Water pollution is said to occur when water loses its natural qualities and becomes unsafe for living things. The natural qualities of water are that it must be colourless, odourless and tasteless.

Presentation Step II – Teacher fixes on the board a picture of the various ways water can be polluted, and allows students to identify them as depicted, thus:

1. Soaps and detergents: used in washing plates, cars, and other materials may flow into the source of water supply in the community, e.g. stream
2. Oils – oils such as vegetable oil, kerosene, engine oil, petrol, and others may flow into the source of water supply in the community.
3. Animal dung and Human faeces: if the two are not properly disposed, they flow into sources of water supply in the community.

Presentation Step iii – Teacher and students to discuss the effect of water pollution, thus:

1. Reduced activity: aquatic organisms are poisoned by the pollutants.
2. Health hazards: many diseases such as typhoid, skin rashes, etc, are contracted from polluted water
3. Prevention of sporting activities: swimming and fishing become difficult in polluted water and streams

Presentation Step iv- Teacher and students to read and discuss ways of controlling water Pollution, thus:

1. Proper discharge of both domestic and industrial waste substances
2. Use of minimum amounts of detergents at home and in industries.

Presentation Step v - Students split into teams to cooperatively read and discuss the following sub topics.

- iii) Sub topic 1 – Definition and causes of water pollution
- vii) Sub topic 2 – Definition and effects of water pollution
- iv) Sub topic 3 – Definition and control of water pollution

Evaluation – The teacher evaluates the lesson by way of asking students the following questions

1. What would you say is water pollution?.
2. Mention some of the ways through which water can be polluted?

Briefly explain each

3. Mention some of the effects of water pollution
4. Mention some ways water pollution can be controlled

Summary/Conclusion – The teacher summarizes the lesson by highlighting the various sub topics treated: definition of water pollution causes of water pollution, effects of water pollution and ways of controlling water pollution.

Appendix XII

Lesson Plan for the Control Group

1

Name of School	-	
Date	-	
Class	-	JSS II
Duration	-	40 Minutes
Sex	-	Mixed
Average Age	-	12 and above
Subject	-	Reading Comprehension
Topic	-	Social Group
Behavioural Objectives	-	By the end of the lesson students should be able to:
	i)	Pronounce and define unfamiliar words used in text
	ii)	Define social group
	iii)	Mention the two major types of social groups
	iv)	Discuss the characteristics of the two major types of social group.
Teaching Strategies	-	i) Conventional method of instruction
Instructional Materials	- i)	A chart depicting social group

Previous Knowledge - Students have learnt about man and his social environment.

Introduction - Teacher revises the previous lesson, asking students the following questions:

- i) Mention some of the features that make up the physical environment of man
- ii) Mention some of the factors of the social environment.

Teacher identifies unfamiliar words used in the text. Teacher leads students in correct pronunciation of said words followed by their definitions using students' dictionaries

Presentation Step I – Teacher places the chart depicting social group on the blackboard and defines social group, thus:

A social group is a collection of people who interact with one another, and work towards common interests and goals.

Teacher to stress that an entire society is made of social groups, and that the basis of a society is in the social group.

Presentation Step II – Using the instructional chart, students are allowed to identify the two types of social groups:

- i) Primary social group
- ii) Secondary social group

Presentation Step III – Using the instructional chart, teacher and students to read and discuss the characteristics of primary social group, thus:

- i) The best example of a primary social group is the family which may include extended or compound family. Other examples of the primary social groups are age groups, and play mates
- ii) Members of the social group know each other very well, relate well and communicate freely with one another.
- iii) They have interest relationship.
- iv) Membership is not large so members know their leaders easily.

Presentation Step iv – Using the instructional chart, teacher and students to read and discuss the characteristics of secondary social group thus:

- i) Membership is usually very large
- ii) Some examples are trade union group membership and membership of apolitical party.
- iii) They are usually not related by blood.
- iv) Their relationship is usually interpersonal
- v) Members come from different geographic locations
- vi) These various characteristics affect group behaviour.

Evaluation – The teacher evaluates the lesson by way of asking students the following questions:

- i) What is social group?

- ii) Mention the two major types of social groups.
- iii) Mention and discuss any two characteristics of the primary social group
- iv) Mention and discuss any two characteristics of the secondary group

Summary/Conclusion – The teacher summarizes the lesson by highlighting the various sub topics: meaning and types of social group, characteristics of primary social group, and characteristics of secondary social group.

Lesson Plan for the Control Group

2

Name of School	-	
Date	-	
Class	-	JSS II
Number of Student	-	40 Minutes
Sex	-	Mixed
Average Age	-	12 and above
Subject	-	Reading Comprehension
Topic	-	Group Behaviour
Behavioural Objectives	-	By the end of the lesson pupils should be able to:
		i) Pronounce and define some unfamiliar words used in passage ii) Define group behaviour iii) Mention and discuss the two types of group behaviour` iv) Discuss the benefits of group behaviour
Teaching Strategies	-	i) Conventional method of instruction
Instructional Materials	-	i) Pictures of various forms of community action ii) Pictures of various forms of community service

Previous knowledge - Students have learnt about primary and secondary social groups

Introduction - Teacher revises the previous lesson, asking the following questions:

- i) Define social group
- ii) Mention the two types of social groups
- iii) Mention two characteristics each of the primary and secondary social groups.

Teacher identifies unfamiliar words used in the text. Teacher leads students in correct pronunciation of said words followed by their definitions using students' dictionaries

Presentation Step 1 – Teacher fixes on the board a picture of people undertaking a monthly sanitation exercise and defines group behaviour, thus:

When two or more persons come together in a group and act in the same way, it is called group behaviour. Group behaviour is sometimes called collective action or collective behaviour.

Students should be allowed to cite examples of group behaviour, for example cooking a meal for the family, among others

Presentation Step 11 - Teacher identifies the two types of group behaviour:

- i) Mass action: This takes place when more than two people come together in large number to show displeasure or support for a policy being undertaken by the community, local, local, state or federal

government. Examples of mass action include the Aba women riot of 1929, and the rejection by Nigeria students of the Anglo. Defence pact in 1961

- ii) Community service – This is done by both the primary and secondary social groups by way of embarking on community services (free of charge) with the sole aim of improving the community. Examples of community services include building community bridges, building markets and roads, among others

Presentation Step iii - Teacher and students to read and discuss the benefits of group behaviour, thus:

A major benefit of group behaviour, when properly directed, is that it can ensure the right change in lives of people. For example, when the Nigerian students protested against the Anglo- Nigerian Pact in 1961, the government listened and pulled out of the pact to prevent further control of Nigeria by Britain. A similar example was the Aba women riot of 1929 which till today has seen women free from paying of poll tax.

Evaluation- Students' level of comprehension is evaluated by teacher using the following questions:

- i) What is group behaviour?
- ii) Mention the types of group behaviour that there are.

- iii) Discuss some of the benefits of group behaviour-
cite some specific examples.

Summary/ Conclusion- Teacher summarizes the lesson by highlighting the various sub- topics: definition of group behaviour, types of group behaviour, and discussion of the benefits of group behaviour.

Lesson Plan for the Control Group

3

Name of School	-	
Date	-	
Class	-	JSS II
Duration	-	40 Minutes
Sex	-	Mixed
Average Age	-	12 and above
Subject	-	Reading Comprehension
Topic	-	Marriage
Behavioural Objectives	- By the end of the lesson students should be able to: i) Pronounce and define unfamiliar words used in text ii) Define marriage iii) Mention the three(3) forms of marriage iv) Discuss the three(3) forms of marriage	
Teaching strategies	-i) Conventional method of instruction	
Instructional Materials	– i) A picture depicting Christian marriage ii) A picture depicting ordinance marriage	

iii) A picture depicting Islamic marriage

iv) A picture depicting traditional marriage

Previous knowledge - students have learnt about culture and the various aspects of culture.

Introduction - Teacher revises the previous lesson, asking students the following questions:

- i) What is culture?
- ii) Mention the various aspects of culture.

Teacher identifies unfamiliar words used in the text. Teacher leads students in correct pronunciation of said words followed by their definitions using students' dictionaries

Presentation Step I – Teacher fixes a picture of a wed couple and, defines marriage thus:

Marriage is the joining of a man and woman as husband and wife to start a new family..

Presentation Step II – Students will be asked by the teacher to mention the different forms of marriage that there are. Teacher and students to discuss the different forms of marriage, thus:

- i) Religious marriage

- a) Christian marriage – The ceremony takes place in church. The Christian marriage does not allow a man to have more than one wife. The ceremony is conducted by a clergyman.
- b) Islamic marriage – On the appointed day for the marriage, the bridegroom, accompanied by some friends, goes to the place agreed upon. Two trustworthy witnesses must be present. All persons present must recite the *fatiha*. Normally four conditions must be fulfilled before the marriage can be approved. They are:
 - i) The bride must have a guardian who will arrange the marriage on her behalf
 - ii) A bride- price must be paid by the man
 - iii) There must be people to witness the marriage agreement
 - iv) The two partners must be old enough for marriage
- ii) Ordinance marriage - This type of marriage takes place at a marriage registry or court. Muslims, Christians and traditional worshippers may prefer ordinance marriage to other forms of marriage. In ordinance marriage, like the Christian marriage, the man is not allowed to have more than one wife.

Presentation Step iii – Teacher and students to read and discuss customary marriage, thus:

This form of marriage is also called traditional marriage. Elders and relatives in the family usually conduct the marriage. IT involves a third party called the-go-between. Customary marriage also involves the

paying of a dowry or bride-price (in kind or in cash). The marriage is concluded with ceremonies which members of the community would see or witness.

Evaluation – The teacher evaluates the lesson by way of asking students the following questions:

1. What is marriage?
2. Mention the three forms of marriage.
3. Briefly discuss any of the three forms of marriage.

Summary/Conclusion – The teacher summarizes the lesson by highlighting the various sub topics of the lesson: definition of marriage, and the three forms of marriage.

Lesson Plan for the Control Group

5

Name of School	-	
Date	-	
Class	-	JSS II
Duration	-	40 Minutes
Sex	-	Mixed
Average Age	-	12 and above
Subject	-	Reading Comprehension
Topic	-	Water Pollution

Behavioural Objectives - By the end of the lesson students should be able to:

- i) Pronounce and define some of the unfamiliar words used in text
- ii) Define water pollution
- iii). Mention the various causes of water pollution
- v) Identify the various causes of water pollution
- vi) Discuss ways of controlling water pollution

Teaching Strategies - The teacher uses:

- 1) Conventional method of instruction

Instructional Materials – i) A picture depicting the various ways water can be polluted

ii) Some pictures depicting some health conditions caused by polluted water

Previous knowledge – Students have learnt about types of diseases and how to prevent them

Introduction - Teacher revises the previous lesson, asking pupils the following questions:

1. Mention any three types of disease that you know
2. Identify the modes of transmission of diseases
3. Mention and briefly discuss the various ways that diseases can be prevented

Teacher identifies unfamiliar words used in the text. Teacher leads students in correct pronunciation of said words followed by their definitions using students' dictionaries.

Presentation Step I – Teacher fixes a picture showing ways by which is polluted and defines water pollution as follows:

Water pollution is said to occur when water loses its natural qualities and becomes unsafe for living things. The natural qualities of water are that it must be colourless, odourless and tasteless.

Presentation Step II – Teacher fixes on the board a picture of the various ways water can be polluted, and allows students to identify them as depicted, thus:

1. Soaps and detergents: used in washing plates, cars, and other materials may flow into the source of water supply in the community, e.g. stream
2. Oils – oils such as vegetable oil, kerosene, engine oil, petrol, and others may flow into the source of water supply in the community.
3. Animal dung and Human faeces: if the two are not properly disposed, they flow into sources of water supply in the community.

Presentation Step iii – Teacher and students to read and discuss the effect of water pollution, thus:

1. Reduced activity: aquatic organisms are poisoned by the pollutants.
2. Health hazards: many diseases such as typhoid, skin rashes, etc, are contracted from polluted water
3. Prevention of sporting activities: swimming and fishing become difficult in polluted water and streams

Presentation Step iv- Teacher and students to read and discuss ways of controlling

water Pollution, thus:

1. Proper discharge of both domestic and industrial waste substances
2. Use of minimum amounts of detergents at home and in industries.

Evaluation – The teacher evaluates the lesson by way of asking students the following questions

1. What would you say is water pollution?.
2. Mention some of the ways through which water can be polluted?

Briefly explain each

3. Mention some of the effects of water pollution
4. Mention some ways water pollution can be controlled

Summary/Conclusion – The teacher summarizes the lesson by highlighting the various sub topics treated: definition of water pollution causes of water pollution, effects of water pollution and ways of controlling water pollution

Appendix XIII

Reading Comprehension Texts

Text 1

Social Groups

Social groups are collections of people who interact with one another, and work towards common interest and goals. It also shows that an entire society is made up of social groups. This means that the basis of society is in its social groups.

These are either primary social groups or secondary social groups.

1. The best example of primary group is the family. This can be nuclear, extended or compound family.

The family is the smallest and the closest of primary groups. People in the very small village, for example, age groups and playmates can also form primary groups. What is important is that members of a primary group know one another very well; they relate very well; they communicate freely with one another; they feel free with one another; and they have very intimate relationship

Because membership is not large, it is easy to organise their lives and activities. They know their leaders easily. They also carry out the objectives of the group without much difficulty.

2. Membership of secondary groups is usually very large. For example, trade union group membership or membership of a political group. This may be several hundreds. They are usually people who may not be related to blood or by culture. Their relationship is usually inter- personal.

Because the number is large and members come from various backgrounds, the way they talk and behave could vary. It is usually not easy to organise and control them. These characteristics affect group behaviour a lot.

Text 2

Group Behaviour

Group behaviour shows quite clearly in the actions and activities of the primary and the secondary social groups. Generally speaking, group behaviour can be categorised into two. We can easily see this in mass action and in community services.

Mass action is an essential part of the way the secondary social group behaves. Mass action takes place when people come together in large numbers to show or register their displeasure against or their support for any issue or any policy of authorities e.g. community, local government, state or federal authorities. People readily join secondary group activities to protest what they think is for public good.

The first if such organised mass action before Nigeria's independence was the Aba Women riot in 1929. Then the Women at Aba (now in Abia State) protested poll tax imposed on them as women. The protest was against the Colonial Administration as we had not gained independence then.

The second mass action was immediately after Nigeria secured independence in 1960. The very first session of the newly inaugurated Nigerian House of Representative and Senate of newly independent Nigeria passed into law an Anglo-

Nigerian Defence Pact which provided military bases for the departing colonial power in Kano.

Late Chief Obafemi Awolowo, then Premier of the Western Region, was the first to raise an objection to the pact. Soon after, Nigerian students rose in mass rallies against the pact which they saw as a loss of their national sovereignty and an indirect way of making Britain to continue to rule. In 1961, the Anglo-Nigerian Defence Pact was abrogated.

Since then, people have organised mass rallies in different parts of the country to protest hike in petroleum prices, poor conditions of service of workers, teachers, health workers, petrol tanker drivers etc. But at times, there are religious mass actions when people feel that some groups ridicule or undermine their religious beliefs. Such actions are sometimes violent.

Text 3

Marriage

When a man and woman are joined together as husband and wife to start a new family, both of them are taken as married. Marriage gives rights to the wife and husband. There are three forms of marriage in our society. These are religious marriage, ordinance marriage and customary marriage.

1. Religious marriage

This could either be Christian or Islamic marriage.

a. Christian marriage

The ceremony takes place in a church. The bride usually wears a white dress with a veil over her head and she is given away by her father. This form of marriage does not allow a man to have more than one wife. Usually, the marriage starts with ceremonies like writing- in, introduction, and paying the bride- price.

b. Islamic marriage

On the day appointed for the marriage, the bridegroom, accompanied by some friends, goes to the place agreed upon. They are received by the guardian, or agent and some friends of the bride. Two trustworthy witnesses must be present. All persons present recite the *Fatiha*, and the bridegroom delivers the dowry. The bridegroom and the agent of the bride sit on the praying mat while facing each other and grasping each other's right hand, raising the thumbs and pressing them against each other.

2. Ordinance marriage

This type of marriage takes place at a marriage registry or court. Christians, Muslims, or believers in other religious practices and other citizens may prefer ordinance marriage to other forms of marriage.

In most cases, such marriages usually involve exchange of wedding rings between the bride and bridegroom. The bride, the bridegroom and the chosen relatives sign the marriage register in the presence of witnesses who may be their parents, relations or friends. This makes the marriage 'legal', i.e. according to the laws of the land. Like the Christian marriage, this form does not allow a man to have more than one wife.

3. Customary marriage

This form which is also called traditional marriage follows customary laws and practices. Elders in the family and relatives usually conduct the marriage. It involves introduction by a third party- called the '*go-between*'. It also involves dowry or bride- price which could be in cash (money) or some farm products. The marriage is usually concluded with ceremonies which members of the community would see or witness.

Text 4

Conditions for Marriage

We talked about some conditions of marriage when we discussed forms of marriage.

Some of the major conditions are:

i. Physiological fitness

The book of Islam says: "Liberty is allowed a woman who has reached the age of puberty to marry". This is an aspect of physiological fitness. When a girl reaches puberty, nature confirms that he or she is becoming or is actually ready to marry.

In the culture of the Efik and Ibibio people, a girl is prepared for marriage in the fattening room (Nkuho). At this place, she is fed very well, she gets all kinds of care, and the entire body structure is big enough to take a pregnancy without much difficulty.

Among the Fulanis, a boy goes through the Sharo festival. This is a test of endurance which a person who says he is ready to marry must undergo. At the

ceremony, two people with long sticks in hand would cane the person thoroughly before the community and the girl he proposes to marry. If he shows any kind of pains or cries while the public flogging lasts, he is not considered physiologically fit to marry.

ii. Psychological readiness

Both the man and the woman willing to marry must, themselves, be ready for marry. The woman shows these signs much earlier than the man. You see her early in life mounting baby dolls on her back. You see her playing with baby dolls whenever she is free. She watches patiently, when her mother or relatives feed babies. When she is with her peer groups, she mimics her mother feeding babies.

iii. Social stability

The man and woman getting married must also be stable socially. They must come from families where there is love; families where people share joys and sorrows, families that are known for good things in their society and whose names are respected. These are some of the things that would assist both of them to choose their friends. These are qualities which would make their peer group members respect and accept them.

iv. Financial readiness

People who prepare to be husband and wife have many responsibilities to shoulder. Part of the marriage vows is “to love and to care”. Caring means looking after what affects the husband and the wife. The total life and living of the couple are in their

hands. What they eat, where they live, what they do for a living, education of children (if they have), health matters, even extended family matters, transportation are some of what the couple should look after. All these are part of the responsibilities awaiting people that want to marry. They are great costs. The husband must have a job or means of raising money for family living.

Text 5

Water pollution

Clean water is colourless, odourless and tasteless. If water loses these qualities then it is no longer safe for drinking.

The discharge of harmful waste substances into a body of water is described as water pollution. Water becomes polluted when it loses its natural qualities and becomes unsafe for living things. Polluted water may contain materials that are poisonous to living things. However, boiling and filtration of water before use may destroy some of the poisonous materials.

Causes of water pollution

Water pollution is caused by the discharge of waste substances into the body of water in amounts that are harmful to organisms. The waste substances are generated from the activities of human beings at home, in the industries or farms. They could be discharged directly or indirectly into the bodies of water. The waste substances generated from activities in the home are called domestic wastes. Those from

industries and farms are called industrial wastes. There are many types of domestic and industrial waste.

Domestic waste substances include the following:

1. Soap and detergents used in washing plates, clothes, cars and other materials
2. Oils such as vegetable oil, kerosene, engine oil or even petrol from cars.
3. Refuse dumped beside the river or stream in the community may decay and produce toxic materials.
4. Dung from animals such as chicken, dog, goat, cow left on land may decay and the poisonous materials in them are washed by rain into the stream or river around your home.
5. Human faeces sometimes contain eggs of intestinal worms and other harmful micro- organisms.

Effects of water pollution

Water pollution is dangerous to life in several ways. These are as follows:

1. Reduced activity

Organisms that depend on water may find it difficult to use polluted Water, and the common effect is that aquatic organisms are poisoned by the pollutants.

2. Death of organisms

Polluted Water contains poisonous substances which may kill water organisms such as fish.

3. Prevention of sporting activities

Sporting activities such as swimming and fishing may become difficult in polluted streams or rivers.

4. Health hazard

Quite a number of water-borne diseases come from water polluted by human faeces. Examples are typhoid, elephantiasis, skin rashes, etc.

5. Adverse effects on economy

Water pollution can affect the economy or income of individuals, families and societies. For instance, fishing is a profitable human activity. If all the rivers were polluted, fishermen would be out of business and without income.

Appendix XIV

Validation of the Lesson Plans

Validation of the Lesson Plans

Appendix XV

Cooperative Learning Manual for Teachers in the Experimental Group

Theory

Day One to Day Two

What is cooperative learning?

By its simple definition, cooperative learning can be defined as a group of individuals working together to attain a common goal. It is the instructional use of small groups so that students, work together to maximize their own and each others' learning. Although cooperative learning involves putting students into groups, it is not the same as group learning. A few graphic differentiations of group learning and cooperative learning are given below.

Cooperative Learning	Group Learning
1. Positive interdependence: Students sink or swim together. Face – to – Oral Interaction. 2. Individual accountability: Each pupil must master the material. 3. Feedback and discussion of students' behaviour is an integral part of every activity before moving on- such as 'nice job' or 'next time try to work harder'.	1. No interdependence: Students work on their own, often or occasionally checking their answers with other students. 2. Hitchhiking: Some do most or all of the work. Then the rest copy. 3. No discussion of how well students work together other than general comment.

Advantages of Cooperative Learning

The cooperative learning strategy has many advantages. They include the following:

- a. Students taught with this structure make higher achievement
- b. Students who participate in cooperative learning have higher levels of self-esteem and greater motivation to learn.
- c. Students have a greater sense of belonging that classmates have positive regard for one another.

Day Two

Methods of Cooperative Learning (STLM)

The cooperative learning strategy is an effective but complex strategy of learning. However, many researchers are fashioning newer methods or structures of applying the strategy. A few of the strategies reviewed by Slavin (1995) are discussed below:

a. Students' Team Learning Methods

This particular structure emphasises the idea that students work together to learn, and are responsible for their team mates learning as well as theirs. For Students Team Learning to be successful, these concepts are essential: team rewards individual accountability, and equal opportunities for success.

b. Students Team – Achievement Divisions

The strategy involves competition among students. Students are grouped heterogeneously by ability, gender, and ethnicity where they learn materials in teams and take quizzes as individuals. Slavin (1999) considers the structure appropriate for a variety of subjects such as science, mathematics, social studies, among others.

c. Jigsaw II

The strategy occurs between teams for specific group rewards, which are based on individual performance.

Other strategies include circles of Learning, Team – Games – Tournament (TGT), Jigsaw and Jigsaw III. Others include Group Instruction, Complex Instruction, Team Accelerated Instruction (TAT), Comparative Integrated Reading and Composition (CIRC) and Structured Dyadic Methods.

Pitfalls of Cooperative Learning

The cooperative learning strategy is not without its many drawbacks. This is especially true when teachers fail to appropriately apply the strategies. It is incumbent therefore to ensure that these drawbacks are adequately checked so as not to allow them adversely affect the use of the strategies.

a. Free Rider

The Free Rider effect is said to occur when some group of students do most of the work or learning while others go for the ride.

b. Diffusion of Responsibility

This occurs when students or members seen or believed to be less active or intelligent have their contributions or views ignored or brushed aside by other members of the group.

c. Learning a Part of Task Specialization

The application of cooperative learning strategies such as the Jigsaw, group investigation and other related strategies would usually lead to group members learning a great deal of their own part of the task but not the other content of the task.

Practical Application of STAD

To ensure that the cooperative learning strategy is correctly used, the teachers for the experimental group were provided basic training for practical teaching in the classroom for three days.

Day One: The teachers and research assistants are guided on how to assign students to cooperative learning groups. This would be done heterogeneously where students are assigned to teams of five students per group.

- Students are also encouraged to maintain seating arrangements for cooperative learning.
- Students are also sensitized on the need for social skills for group work, as well as work cooperatively to solve problems or carry out projects.

Day Two: Each cooperative learning group is given the opportunity to revise the previous topic as well as cooperatively answer questions based on the topic. Thereafter, the teacher presents the lesson using direct teaching for twenty minutes.

Day Three: The contents of the lesson taught on the previous day were provided to each cooperative learning group where students worked in their team to master the material.

Day Four: Tests based on the topic treated were administered for 25 minutes. High scoring teams were recognized in the class while teams that performed poorly were encouraged to work harder next time.

Appendix XVI

Training/Sensitization of Students in the use of Cooperative Learning

Student Teams-Achievement Divisions (STAD)

The cooperative learning strategy is a highly structured and elaborate method of instruction. Its misuse by instructors has largely accounted for its failure. Generally, cooperative learning, irrespective of the type being used by a given instructor, must be built on the five components of the strategy: group interdependence, equal participation, and individual and group accountability. Others include simultaneous interaction and group processing. These components ensure that students acquire appropriate social skills which are crucial to the success of cooperative learning.

To ensure adequate sensitization, the researcher, assisted by the teacher in the experimental group and research assistants, will systemically expose students to the five components of the cooperative learning strategy as follows:

Day one

Step 1

Students will be told that all team work will be preceded by class presentations by the teacher using the conventional method of instruction. However, students would be told that class presentations would be followed by various team works on the basis of the various lessons presented. Students will be encouraged to pay careful attention

during presentations in order for their group to do well in learning their allotted material and to also do well in the tests.

Step 2

- i. Positive interdependence- sink or swim together)
- ii. Face – to face- interaction or promote each other's learning

Teams will be composed of five students per group. Since the team is the most important component of STAD, continuous emphasis should be placed on team members doing their best for the team, and the team doing its best to help individual members. They should be reminded that the success of the group is every member's success, and failure every member's failure. Consequently, students should be encouraged to discuss problems together, and correct mistakes if members made mistakes.

Step 3

- iii. Individual & Group interaction/ no social loafing

To ensure individual accountability, each member of the team will have his or her contributions recorded. Each member will be encouraged to explain to others what he or she has learned. To ensure the success of individual and group accountability, each team shall have a checker whose role will be to ensure each member of the team make contributions to the success of the group.

Day Two

- iv. Interpersonal & Small-Group Skills
- v. Group processing

Group members will be taught to respect schedule time for the group to meet. The need to communicate among members will also be emphasised upon. To further deepen interpersonal and social skills, the following team building exercises will be stressed upon:

- i. Members will be encouraged to know each other by name
- ii. Teams will be encouraged to have a logo for respective groups, develop a team logo and a team song.

To ensure group processing, members will be encouraged to regularly assess contributions made by each member of the group. Members will also take collective decisions on members' that contributed reasonably to the success of the group and those that have not contributed enough to the success of the group.