ASSESSMENT OF RELATIVE EFFECTIVENESS OF COOPERATIVE LEARNING AND PROBLEM-SOLVING STRATEGIES ON STUDENTS' PERFORMANCE IN BUSINESS STUDIES IN KADUNA STATE, NIGERIA

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FACULTY OF EDUCATION

AHMADU BELLO UNIVERSITY, ZARIA

JULY, 2014

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A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA IN PARTIAL FULFILMENT FOR THE AWARD OF M.ED BUSINESS EDUCATION

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DECLARATION

I, MUTUAH Talatu, declare that, this Thesis titled "Assessment of relative effectiveness of cooperative learning and problem-solving strategies on Students performance in Business Studies in Kaduna States" has been written by me. It is the record of my own research work under the supervision of PROF. A.A. Udoh and PROF. M.M. Aliyu. It has not been presented in any application for higher degree. The information derived from the reviewed literature has been dully acknowledged in the text and a list of references provided. No part of this Thesis was previously presented for another degree in any university.

Mutuah Talatu _____ _____

Name of Student) (Signature) (Date)

CERTIFICATION

This Thesis titled "Assessment of relative effectiveness of cooperative learning and problem-solving strategies on students performance in business studies in Kaduna States" by Mutuah Talatu has been read and meets the regulations governing the award of the degree of Master`s of Education (Business Education) of Ahmadu Bello University, Zaria, and is approved for its contributions to knowledge and literary presentation.

PROF. A.A Udoh	_____	_____
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Dean, School of Postgraduate Studies	(Signature)	(Date)

DEDICATION

This research work is dedicated to the Almighty God and my late parents.

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DEFINITION OF TERMS

Business Studies: Is an integrated Pre-Vocational course taught at the Junior Secondary School (JSS) level. It is made up of Commerce, Book- keeping, Office Practice, Shorthand and Typewriting.

Cooperative Learning; Is a method use in teaching a small group of students in which Students work together to maximize and gain from each other.

Problem Solving: Is an action taken by the learner to reach anticipate Solution when faced with a problem situation, or is engaging in a task for Which the solution method is not known in advance.

Strategies; Are methods or techniques use by an instructor in teaching and learning process of imparting knowledge to the learner.

LIST OF ABBRVIATIONS

ANCOVA----------Analysis of Covariance

ANOVA----------Analysis of Variance

CD-ROMS----------Compact Disc Read only Memory System

FAT I AND II ----------Financial Accounting Test I and II

GAAT----------Gymnastics Academic Achievement Test

GAS----------Gymnastics Attitude Scale

GPEF----------Gymnastics Evolution Forms

ICT----------Information Communication Technology

IEP----------Individual Education Plan

JSCE----------Junior Secondary Certificate Examinations

JSS----------Junior Secondary School

LIS----------Learning Style Inventory

$\bar{x}$ ----------Mean

SD ----------Standard Deviation

SE ----------Standard Error

SBAT----------Standardize Business Achievement Test

SOS----------Student Opinion Scale

STAND----------Students' Teams Achievement Divisions

Abstract

The study was carried out to establish the relative effectiveness of Cooperative learning and Problem-solving strategies on students' performance in business studies in Kaduna State. The design of the study was a quasi-experimental pre-test post-test research design using intact classes. A sample of 60 students was randomly selected from two secondary schools in northern senatorial zone of Kaduna state. Four researcher questions were drawn up to guide the study; four null hypotheses were formulated for testing at 0.05 level of significant. The instrument for data collection was a Business Studies Achievement Test (BSAT). Data collected from the study were statistically analyzed using mean, standard deviation (SD) and standard error (SE) for the research questions. The null hypotheses were tested using the t-test at 0.05 level of significance. The results indicated that students taught using cooperative learning strategy performed better than those taught using problem-solving strategy. The study recommendation among others was that business studies teachers should use more of cooperative learning strategy in the teaching of Business Studies in order to improve the performance of students.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Teaching is the science and art of assisting a person to learn. The science in teaching entails the use of acquired knowledge from natural and behavioral science in order to help appreciate the circumstance and personality of the learner, while the art aspect of teaching involves the use of creative and demonstrative skills in aiding the delivery of instruction (Ajoma, 2009) Learning on the other hand, is the process by which some activities enable the learner to acquire experiences that tend to influence in his/her future behavior, provided that the characteristics of the change in behavior cannot be explained on the basis of negative response tendencies, maturation or temporary state of the learner (Ajoma, 2009). Therefore, it is clear that teaching and learning go side by side and the central purpose of the process is to effect desirable changes in the behavior of the learners. The degree to which objectives are achieved and extent to which targeted problems are solved shows the effectiveness of the instructors and also that of the learner. In contrast to efficiency effectiveness is determined without reference to costs and whereas efficiency means doing the thing right.

Business studies is taught in Junior Secondary Schools. Business Studies is an integrated Pre-Vocational course taught at the Junior Secondary School (JSS) level. It is made up of commerce, book-keeping, office practice, shorthand and typewriting. The five units of business studies are naturally dynamic and their contents respond to the changes in the business world. For example, methods of communication before now

included telegrams and excluded e-mails, fax, and others but today, telegrams are presented only to show the trend in the development of information technology. Also, methods of typing before now, covered manual and electric typewriter, but today what is taught include Ms Word, Ms Excel among others. Result of this dynamic approach to the teaching of key boarding and word processing, subject teachers need to update their knowledge and skills regularly if they must remain relevant and also produce school leavers who would meet the needs of business world. The teaching of Business Studies equips the learner with the necessary skills of running a business especially the financial, managerial aspects and also determine the performance of the learners. Performance in the 'A' and 'B' grades are seen as excellent students' are average while those in D and E grades are seen as below average students. The performance of students can only be improved when the teacher uses better teaching strategies.

Relevant teaching strategies must be adopted by the teacher who has the knowledge about the subject or topic(s) to be taught in order to impart these skills in students. There are different views as to different strategies of teaching used at the Junior Secondary School levels. The teaching strategies examined in this study are cooperative learning and problem-solving strategies.

Cooperative learning is the instructional use of small groups in which students work together to maximize and gain from each other (Johnson and Johnson, 2009). According to Kerka (2000). Cooperative learning as an instructional methodology provides opportunities for students to develop skills in group interaction and in working with others who are needed in today's world. One of the biggest targets of today's

educational system which aim at development and change is to teach students how to reach information by way of research, instead of giving it to them directly. Furthermore, Dunn and Wilson (2001) stated that, students cannot do the required activities due to the fact that classes are crowded, and materials are insufficient and they spend the most of their time waiting for feedback from instructors. For this reason, students feel bored loose attention and they rarely experience the feelings of belonging and pride.

A problem-solving strategy comprises action steps taken by the learner to reach anticipated goal when faced with a problem situation, it involves engaging in a task for which the solution is not known in advance. Problem-solving is equally incorporates using information and reasoning to overcome obstacle or barrier. Problem solving is to learn how to learn. The most convenient approach with regard to reaching this aim in teaching and learning environments is the problem based learning taken part in active learning. The basis of problem-based learning is rooted in Dewey's learning by doing and experiencing principle. The problem based learning is an active learning which enables the students to become aware of and determine his\her problem solving ability and learning needs, to learn to learn, to be able to make knowledge operative and to perform group works in face of real life problems.

For any teaching that takes place there must be assessment. Without assessment teaching becomes mere presentation without assessment of what the learners have made of what you have offered them. So assessment is not a discrete process, but integral to every stage of teaching, from minute to minute as much as module to module. Assessment can also be seen as a process of gathering information using various methods to systematically gauge the effectiveness of the institution and academic programs to

document student learning, knowledge, behaviors, and skills as a result of their collegiate experiences.

Effectiveness is the degree to which objectives are achieved and the extent to which targeted problems are solved. In contrast to efficiency effectiveness is determined without reference to costs and whereas efficiency means doing the right thing.

It has therefore become apparent that the lecture method which is currently the predominant teaching approach in Nigerian secondary schools is inappropriate and ineffective for achieving the objectives of the Business Studies programme. There is, therefore, a need to search for more effective strategies which are suitable and efficient for promoting the level of secondary school Business Studies performance beyond contemporary limits and to the satisfaction of the current business studies curriculum requirements. It is against this background that this study was taking to find out the effect of cooperative learning and problem-solving strategies on junior secondary school students' performance in Business Studies in Kaduna state.

1.2 **Statement of the Problem**

The performance of students in Business Studies which has been in the decline in the recent years, this is evident by the changes in the recent Junior Secondary School Examination result (JSSE) of 2010-2011. For instance, the figures available from Kaduna State Ministry of Education reveals that, 23 students had 'A' 102 had 'B' in 2010 and 18 had 'A', 89 'B' in 2011 out of 21,566 students that sat for JSSCE in Kaduna State.

Prominent among the factors which have been identified as contributing to the persistent low interest and low level of performance in Business Studies are: poor teaching methods adopted by Business Studies teachers (Ogundare 2000; Adeyemi 2003)

the predominant use of same texts and instructional strategies in the learner variables such as gender and home background; lack of well organized strategies for concept formation, teacher characteristics and memory skills. It has therefore become apparent that the lecture method which is currently the predominant teaching approach in Nigerian secondary schools is inappropriate and ineffective for achieving the Business Studies programme. Consequently , there is need to search for more effective strategies which would be more suitable and efficient for promoting the students performance in business studies beyond the present limit and to Satisfy the current business studies curriculum requirements (Adeyemi ,2003).

Good teaching is the result of exposing students to certain experience through adequate guidance and providing appropriate learning activities so that they acquire the best form of learning. In spite of efforts made by teacher and learners, we often discover that learning still falls short of desire expectations. This deplorable situation urgently requires business studies educators and curriculum planners to pay attention so as to arrest the problem quickly before too much effort and time are wasted (owolabi, 2008). The problem of this study therefore is to ascertain which of the teaching strategy enhance better performance of junior secondary schools students in business studies. The two strategies which are cooperative learning and problem-solving appears to be a better alternatives to other methods of teaching Business Studies; e.g. lecture method, demonstration method teacher center methods and etc. Note however no evidence available to the researcher about the effectiveness of instructional strategies in teaching Business Studies in Junior Secondary School in Kaduna State.

The researcher is therefore interested in knowing their relative effectiveness as instructional strategies that could be adopted for teaching Business Studies in Kaduna State.

Therefore, it is based on these inconsistencies that have been observed in the methods of teaching that the researcher has been prompted to undertake this study. In other words the concern of the researcher is to establish the relative effectiveness of problem-solving and cooperative learning strategies in teaching Business Studies in Kaduna State.

1.3 Objectives of the Study

The general objective of this study is to determine the relative effectiveness of cooperative learning and problem-solving strategies on students' performance in Business Studies in Kaduna state. The specific objectives are to:

1. determine the per-test and post-test performance of students who are taught Business Studies using cooperative learning strategies.

2. determine the pre-test and post-test performance of students who are taught Business Studies using problem-solving instructional strategies.

3. determine the difference between the post-test of results of Business Studies students taught using cooperative instruction strategy and those taught using problem-solving strategy.

4. find out the pre-test and pos-test difference between the performance scores of male and female Business Studies students taught using cooperative instructional strategy and those using problem-solving strategy.

1.4 Research Questions

The following research questions are formulated for the study with special emphasis on JSS, in Kaduna State, Nigeria.

1. What is the pre-test and post-test performance of students who are taught Business Studies using cooperative learning strategies?

2 What is the pre-test and post-test result of business studies students taught Business Studies using problem-solving instructional strategies?

3 What is the difference in the post-test performance scores of Business Studies students taught business studies using cooperative instruction strategy and those taught using problem-solving instructional strategy?

4 What is the pre-test and pos-test difference between male and female students taught Business Studies using cooperative instructional strategy and those using problem-solving strategy?

1.5 Null Hypotheses

The following Null hypotheses were formulated to be tested for the study.

Ho1 the per-test and post-test scores of Business Studies students taught business studies using cooperative method of instruction will not differ significantly.

Ho2 the pre-test and post-test scores of Business Studies students taught using problem-solving method of instructional strategies will not differ significantly.

Ho3 there is no significant difference on the post-test performance scores students taught Business Studies by using cooperative instruction strategy and those taught using problem-solving strategy.

Ho4. there is significant difference in the post-test performance scores of male and female Business Studies students taught business studies using cooperative instructional strategy and those using problem-solving strategy.

1.6 Significance of the Study

Teaching strategy plays a very important role in the teaching /learning process. The findings of this study will contribute to the body of existing knowledge as regards to the strategy that will enhance students' performance in Business Studies in junior secondary schools in Kaduna state.

The teachers of Business Studies will stand a better chance of reaping from the result of this study, as the study will suggest strategies that would assist teachers in the selection of appropriate teaching strategies that will enhance students' performance.

The federal and state ministries of education should benefit from this study as the study would help in achieving the objectives set by the ministries for students of Business Studies. This is because students' performance would be enhanced and the skills stated in the policy to be achieve, will be achieved.

Equally, curriculum planners could benefit from the findings of this study, because it would be an eye opener in helping them to suggest relevant teaching strategies for teaching different topics in the curriculum content.

In addition Government could benefit from the findings of this study, through successful implementation of strategy policies in educational institutions through embracing Business Studies and also provide adequate fund and facilities to facilitate the teaching and learning of Business Studies in our junior secondary schools.

Finally the study could serve as a point of reference for further research in other subjects and in other part of the country for better teaching and learning to take place in other causes as well.

1.7 Assumptions of the Study

The following basic assumptions are made for the study that:

1. There is difference in the pre-test performance of student taught business studies using cooperative strategy than the post-test performance for the same strategy.

2. There is difference in the pre-test performance of student taught business studies using problem-solving strategy than the post-test performance for the same strategy.

3. There will be no difference between the post-test performance scores of students taught business studies using cooperative instructional strategy and the post-test of those taught using problem-solving strategy.

4. There will be no difference in the post-test performance of male and female students taught using cooperative learning and the post-test of those taught using problem-solving strategy.

1.8 Delimitation of the Study

This study was delimited to public Junior Secondary Schools that offers Business Studies in Kaduna state. Only Junior Secondary Schools that have presented candidates for Junior Secondary School Certificate Examination were used because they met the requirement stated above. It was delimited to the use of three teaching strategies namely; cooperative learning, problem-solving and lecture strategies in teaching Business Studies. These strategies are chosen because they are the strategies the researcher has chosen for the study.

Only the JSSII students both male and female were used for the experimental study because they have experience in the learning of business studies subject for two year and were not too busy on like the JSSIII who were preparing for Junior Secondary School Certificate Examination (JSSCE).

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter reviewed the related literature in relevant journals, textbooks, magazines and papers presented. For the purpose of this study, the review of literature is presented under the following sub-headings:

2.1 Theoretical Framework

In search for the right theoretical frame work suitable for this study touching teaching and learning, educators have found cooperative learning-motivational, cognitive and performance theories more appropriate for this study. This research believes that understanding of cooperative learning-motivational, cognitive and performance theories will help teachers to use the right strategy to assist students for effective learning to take place.

Some Educational Theorists whose work provide the foundation for discussion for this study, which are considered necessary for this work include: Slavin (1987) (cooperative

learning- motivational and cognitive), Ludwig Von Bertalanfty (1956) (Performance theory). These theories are explained as follow;

(a) Cooperative learning-Motivational theories

There are two major theoretical perspectives related to cooperative learning-motivational and cognitive. The motivational theories of cooperative learning emphasize the effect of working together slavin,(1987).

Motivational theories related to cooperative learning focus on reward and goal structures. One of the elements of cooperative learning is positive interdependence, where students perceived that their success or failure lies within their working together as a group (Johnson, Johnson &Holubec, 1986). From a motivational perspective, "cooperative goal structure creates a situation in which the only way group members can attain their personal goals is if the group is successful" (Slavin, 1990). Therefore, in order to attain their personal goals, students are likely to encourage members within the group to do whatever helps the group to succeed and to help one another with a group task.

There are two cognitive theories that are directly applied to cooperative learning, the developmental and the elaboration theories (Slavin, 1987). The developmental theories assume that interaction among students around appropriate tasks increases their mastery of critical concepts (Damon, 1984). When students interact with other students, the have to explain and discuss each other perspectives, which lead to greater understanding of the material to be learned. The struggle to resolve potential conflicts during collaborative activities result in the development in the higher levels of understanding (Slavin, 1990). The elaboration theory suggests that one of the most

effective means of learning is to explain the material to someone else. Cooperative learning activities enhance elaborative thinking and more frequent giving and receiving of explanations, which has the potential to increase depth of understanding, the quality of reasoning, and the accuracy of long term retention (Johnson, Johnson &holubec, 1986). Therefore, the use of cooperative learning methods should lead to improved student learning and retention from both the developmental and cognitive theoretical bases.

(a) Performance Theory

Theory of performance was derived from the system's, theory input-output model developed by Ludwig Von Bertalanfty in 1956. The theory, according to Koontz and Weihrich, (1988) postulated that an organized enterprise does not exist in a vacuum; it is dependent on its environment in which it is established. They added that the inputs from the environment are received by the organization. As predicted by Wooten(1998), aptitude and effort were both significant variables in influencing performance of the traditional students. For the tradition students, grade history, motivation and family responsibilities all influenced the amount of effort the students put forth. However, neither extracurricular activities nor work responsibilities influenced by the students effort. Motivation was significantly influenced by the students' self-expectations and their perceptions of the learning environment. Motivation was the only variable that significantly influenced effort.

The student centered active learning process within which a teacher is merely a guide is the focal point of contemporary education systems. The active learning is a learning process in which the learner takes responsibility of his/her learning and he/she is

given the opportunity to make decisions about various dimensions of the learning process and to perform self-regulation (Acikgoz, 2003). In active learning process, learning is no longer a standard process, but it transforms into a personalized process. Here, the skill of problem -solving, critical thinking and learning to learn are developed. Humans face various problems in their lives and they try to find particular ways to solve these problems. In this respect, it is important for students to be prepared for the future by facing real or real-like problems in their learning environment and producing appropriate solutions to these problems.

What is expected from education is for individuals to become effective problem solvers in their actual lives (Walker and Lofty, 2003; Chin and Chia, 2004). To learn problem solving is to learn how to learn. The most convenient approach with regards to reaching the objective of teaching and learning environments is the problem solving strategies which enable you to take part in active learning. The basis of problem-solving strategy is rooted in Dewey's learning by doing and experiencing" principle. The problem based learning is an active learning which enables the students to become aware of and determine his\her problem solving ability and learning needs, to learn to learn, to be able to make knowledge operative and to perform group works in face of real life problems.

Problem solving strategy is being increasingly used in several areas recently was firstly implemented in the medical science in the 1950s, specifically in the medical school of case Western University in the USA. It was begun to be implemented in the medical school of the McMaster University in Canada at the end of the 1960s (Herreid, 2003). Today, the problem- solving strategy model is used in pre-clinic classes within medicals

faculties of many Universities such as the Harvard University, New Mexico University and McMaster University. This teaching model is put into practice in medical faculties of the Hacettepe University, Ankara University, DokuzEylul University and Pamukkale University in Turkey. In addition to medical faculties, the problem-solving strategy model is also implemented in order educational institutions comprised of fields like natural sciences, engineering and law.

When the literature is examined, it is seen that the research focused on the use of problem-solving strategy model in primary education, secondary education and high education have been reached by the 1980s (Duch, 1995; Gallagher, 1997; Kaptan&Korkmaz, 2002; Eambros, 2002; Senocak, 2005). The problem-solving strategy is a learning model which centers on student, develops active learning, problem-solving skills and field knowledge, and is based on understanding and problem-solving (Barrows &Tamblyn, 1980; Maya , 1993; Mechling, 1995; Skrutvolb, 1995; Major, 2000; Malinowski and Johnson, 2001). In the classrooms where problem-solving strategy model is used, learners take much more responsibility in their own learning progressively. They have become more independent from their teacher gradually and they have become independent learners who can continue to learn in their whole lifetime.

According to Cuhadaroglu 2003; said that, the problem-solving strategy model turns the student from passive information recipient to active, free self-learner and problem solver, and it slides the emphasis of educational programs from teaching to learning. This model enables the student to learn new knowledge by facing his/her the problem to be solved, instead of burdened contents. By means of problem-based strategy, some attitudes of students in relation to such areas as problem-solving, thinking,

group works, communication, information acquisition and information sharing with others are affected positively. The bases of the problem-solving are manly comprised of Problem, Solution, Practice, Research, Questioning, Realism, Originality and Integration. The aim of this learning model is to provide acquisition of information based on facts. In order to achieve this aim, problems are chosen out of the real world. The individual is being developed by making possible the integration with information accumulation of the student.

Even though some differences are observed in practice, problem-solving strategies are performed in sessions within which there are small working groups comprised of 6 or 8 persons guiding by an education mentor. They deal with scenarios involving several problems in above mention sessions, and try to find appropriate answers to these problems. These sessions constitute the foundation of problem-solving strategy system. In these sessions, it is aimed to enable the student learn by setting off the problems that explain the subject matter in the best way (Yuzhi, 2003; skrutvold, 2003;Kthc, 2006). The most important role of the mentor in the problem solving strategy being operate in a student centered manner is to facilitate learning activities by guiding students. Teaching strategy fulfill this role by monitoring discussions, asking questions, helping the resolution of occasional conflicts, enabling the participation of each group member to classroom discussions, giving examples when required, preventing scatter of discussions and making evaluations (Posner and Rudnitsky, 2001;Naktboglu and Altiparmak, 2002; Acikgoz, 2003; Cuhadaroglu, 2003; Onargan, 2004).

2.2 Foundation of Business Studies

Business Studies is defined according to Oxford dictionary," as the study of the activities involved in running a business especially the financial and managerial aspects." According to Obi (2003), Business Studies is an integrated Pre-Vocational course taught at the Junior Secondary School (JSS) level. It is made up of Commerce, Book-keeping, Office Practice, Shorthand and Typewriting. Obi pointed out that these five subjects are naturally dynamic and their contents respond to the changes in the business world. For example, methods of communication before now included telegrams and excluded e-mails, fax, and others but today, telegrams are presented only to show the trend in the development of information technology. Also, methods of typing before now, included manual and electric typewriter excluded computer, but today almost everything is computerized. As a result of this dynamic nature of Business Studies, the subject teachers need to review their knowledge and skills regularly if they must remain relevant and also produce school leavers who would meet the needs of the business world.

These five subjects of Business Studies relate specifically to business and distributive operations and they are compulsory in junior secondary schools. Together they are part of vocational education which encourages the use of the head and hands in acquiring specific practical training required in business and industry. They provide valuable skills which put students in line for some of the important professions such as accountancy, banking, secretary ship and others.

The normal requirement for good performance in these subjects is a good foundation involving clear ideas on their users' interest and a good grounding in English language and Mathematics. With these and keenness in the technical aspects of

education, the sky is the limit when the graduate of secondary schools who learnt Business Studies enter employment from the bottom of the ladder (Majasan, 2005).

Majasan stated that if students show promise earlier or much interest, say at the end of the junior secondary school they will acquire a good foundation on which the senior secondary education will be built. Majasan further explained that for any developing nation like Nigeria to curb unemployment among school leavers, she must operate an effective and efficient Business Studies. Odoh (2001) also reported that a nation desirous of economic growth and development need to emphasize Business Studies as one of the educational strategies. Odoh further observed that Business Studies as the type of education that helps the learner acquire skills and competence required for the basic jobs in both public and private sector. One of the objectives of the Business Studies is the provision of orientation and basic skill with which to start a life of work for those who may not undergo further training. In spite of this laudable objective, present day students still perform below expectation in the Junior Secondary Certificate Examination (JSSCE) in Business Studies.

A study carried out by Obi (2009) revealed that the poor performance of students in Business Studies is as a result of the fact that the students are taught by non-business education teachers. Obi observed that many schools were unable to teach Business Education and most of the schools which offered Business Studies did not teach all the five subjects of the integrated Business Studies due to inadequate number of Business Education teachers and equipment. The performance of students in Business Studies especially in the JSSCE has caused concern to many well informed Nigerians (Odoh, 2001 and Obi, 2009)

Odoh (2001) observed that these deterioration in students' achievement in Business Studies must have been contributed by the methods of teaching students Business Studies. Odoh also stated that many classroom teachers still use teaching methods which do not arouse the interest of the students. Such teaching methods include the lecture method (chalk-talk method), which is not activity oriented and is mainly teacher centered. This method does not motivate the students and do not contribute to the child acquiring the required skills of Business Studies. Douglas, Blanford and Anderson (2002) the teaching of business studies requires application of different strategies or techniques to make it interesting and meaningful. Strategies in this study refer to the teachers' techniques used in the classroom, his activities, behaviour and/or actions taken to improve students' interest, participation and performance in his subject.

Strategies are unique to subject matter and vary from teacher to teacher. It could be an expertise, talent or trait. Teaching strategies include not only the manner of presentation that the teacher employs but everything that he does in the way of arranging conditions, grouping students, guiding activities, making assignments and providing information to aid learning. Akpan (2001) defined teaching (strategies) techniques as the practice and refinement of presentation which a teacher uses to make his teaching more (effective) interesting when using a specific method or teaching aid. According to Ukoha and Eneogwe (2006), strategies are processes adopted by veteran teachers to inject variety in their teaching, stimulate it and maintain the students' interest in it. Therefore in order to avoid student's lack of interest in business studies, they need to be well taught and motivated by using different strategies. Hornby (1998) defined strategy as a plan

designed for particular purposes or the process of planning something or carrying out a plan in a skillful way.

Nwachukwu (2001**)** described teaching strategies as decisions about organizing students, materials and ideas to provide learning. That is, ways of approaching the students to get them interested and understand the subject. Therefore every business studies teacher must devise a means or develop strategies which he can reach out to students to learn and be interested in business studies. This also means that many techniques should be employed for effectiveness of the lesson. Nwachukwu further states that teachers need to vary their teaching strategies in different classroom situations. Etuk (2000) asserted that use of a single approach causes boredom and discipline problems in the classroom.

Offorma (2004) maintained that teachers have to use different resources and teaching strategies to teach students of different abilities and interests. The teachers of business studies should try to make class activities interesting to the students. This can be done by identifying the needs and interests of the students and thereby incorporates them into the class activities. Making use of a variety of strategies to teach a particular subject matter can help to attract and maintain the interest of the students to take active part in the subject. This will make mastery of the subject easy and successful in examinations. The implication of the use of different strategies in teaching business studies is that it will affect the attitudes and behaviour of students positively.

Narasimhan (2007) has observed that what facilitates students' understanding and acquisition of knowledge have been found to be dependent on such learning environment, the teacher's knowledge level and the instructional approaches used. Narasimhan went

further to stress that the teacher characteristics, teaching approaches among others, are aspects of the teacher that are considered very important in influencing students' learning and understanding.

For business studies to perform its function properly, instructional strategies in business studies most be centered on method of seeking the truth which includes those of problems detecting, problem solving, learning by experimenting and discovery learning. This is because Business Studies is an important aspect of human life and as such relevant in the curriculum as discussed below:-

2.2.1 Importance of Business Studies in the Curriculum

Business activity affects the daily lives of all Nigerians as they work, spend, save, invest, travel, and play. It influences jobs, incomes, and opportunities for personal enterprise. Business has a significant effect on the standard of living and quality of life of Nigerians, and on the environment in which they live and which future generations will inherit. Eventually, all students will encounter the world of business, whether they work in urban or rural areas. They must be prepared to engage in business activity with confidence and competence. Young people need to understand how business functions, the role it plays in our society, the opportunities it generates, the skills it requires, and the impact it can have on their own lives and on society, today and in the future. The business studies program will build a strong foundation for those who wish to move on to further study and training in specialized areas such as management, international business, marketing, accounting, information and communication technology, or

entrepreneurship. It will also provide practical skills for those who wish to move directly into the workplace.

Engaging in the world of business involves studying individuals, communities, and organizations, assessing their needs and problems, and generating solutions. Business studies draws upon facts, concepts, and processes from many other fields of study. For example, close links exist between marketing and communications, accounting and mathematics, entrepreneurial studies and technology, international business and world studies, and management and studies of society and human nature. Furthermore, knowledge and skills related to information and communication technology are relevant across all disciplines. Students will be able to apply what they learn in other subject areas to their study of business, as well as to transfer the knowledge and skills they acquire in business studies to their work in other areas.

Business studies provides students with a new, practical context for many of the subjects they studied at the elementary level, including mathematics, science and technology, language, and social studies. It helps students to recognize the relevance of these subjects as they are applied in the world of business – for example, in the study of individuals and diverse communities; in helping people with their needs, challenges, and problems; and in creating products and services that help to improve the quality of life. Business studies clearly demonstrate how a variety of areas of study can be combined in productive activity that affects the lives of millions of people. Courses in this discipline provide knowledge and skills that can help students make a successful transition to postsecondary education, training programs, and the workplace. The business studies

programme, introduced in junior secondary school prepares students to apply their education to real-world challenges, experiences, and opportunities.

2.2.2 Business Studies and Real-World Connection

The business studies curriculum examines the multifaceted functions and operations of businesses, from small businesses to multinational enterprises. These businesses drive the economy, influence the standard of living and the nature and number of jobs, and play a role in the career decisions of many secondary school students. Students are motivated and learn best when they understand the relevance of what they are studying. The Business Studies program provides rich opportunities for relevant, real-world learning experiences. These experiences reinforce theoretical learning and at the same time provide authentic contexts in which students can apply what they have learned. In business studies, programmes that provide pathways to specific apprenticeship and workplace destinations and that include cooperative education courses provide students with valuable information and connections that help them to explore potential work and business opportunities. Business studies goals are discussed in 2.2.3 as follows.

2.2.3 Goals of Business Studies

The fundamental purpose of the business studies programme is to provide students with the knowledge, skills, and attitudes necessary to achieve success in secondary school, the workplace, postsecondary education or training, and daily life.

The goals of the business studies curriculum are to enable students to:

a. gain an understanding of business concepts through the study of subjects such as accounting, entrepreneurship, information and communication technology (ICT), international business, marketing, and business leadership;

b. Achieve business, economic, financial, and digital literacy;

c. Develop the skills, including critical thinking skills, and strategies required to conduct research and inquiry and communicate findings accurately, ethically, and effectively;

d. Apply the knowledge, skills, and attitudes acquired through the study of business to a variety of learning tasks and relate them to business phenomena on the local, national, and global levels;

e. Develop lifelong learning skills that will help them adapt to technological advancements, the changing workplace, and the global economy;

f. Make connections that will help them take advantage of potential postsecondary educational, work, and business opportunities.

These goals can be achieved in a concrete and practical context through real-world learning activities that combine the acquisition and application of knowledge and skills. For these goals to be achieved individuals have roles and responsibilities to play. These roles and responsibilities of individuals in Business Studies Programme are discussed as follows.

2.2.4 Roles of individuals in Business Studies Programme

Different people have roles and responsibilities to play in better teaching and learning of Business Studies, among these people include:

Students*:* Students have many responsibilities with regard to their learning. Students who make the effort required to succeed in school and who are able to apply themselves will soon discover that there is a direct relationship between this effort and their achievement, and will therefore be more motivated to work. There will be some students, however, who will find it more difficult to take responsibility for their learning because of special challenges they face. For these students, the attention, patience, and encouragement of teachers can be extremely important factors for success. However, taking responsibility for their own progress and learning is an important part of education for all students, regardless of their circumstances.

Mastery of concepts and skills in business studies requires a sincere commitment to work, study, and the development of appropriate skills. Furthermore, students should be encouraged to actively pursue opportunities outside the classroom to extend and enrich their knowledge and skills. For example, students can enhance their understanding and skills by keeping up with current events related to local, national, and international business and by developing their employability and technological skills in a business environment as they explore the world of work. Individuals that have roles and responsibilities to play include:

Parents: Parents have an important role to play in supporting student learning. Studies showed that students performed better in school if where parents or guardians were involved in their education. By becoming familiar with the curriculum, parents can determine what is being taught in the courses their children are taking and what their children are expected to learn. This awareness will enhance parents' ability to discuss their children's work with them, to communicate with teachers, and to ask relevant

questions about their children's progress. Knowledge of the expectations in the various courses also helps parents to interpret teachers' comments on student progress and to work with teachers to improve their children's learning.

The business studies curriculum promotes lifelong learning. In addition to supporting regular school activities, parents may wish to encourage their daughters and sons to take an active interest in current affairs and provide them with opportunities to question and reflect on what is happening in the world. Other effective ways in which parents can support students' learning include attending parent–teacher interviews, participating in parent workshops, becoming involved in school council activities (including becoming a school council member), and encouraging students to complete their assignments at home.

Teachers: Teachers and students have complementary responsibilities. Teachers are responsible for developing appropriate instructional strategies to help students achieve the curriculum expectations, as well as appropriate methods for assessing and evaluating student learning. Teachers also support students in developing the reading, writing, oral communication, and numeracy skills needed for success in their courses. Teachers bring enthusiasm and varied teaching and assessment approaches to the classroom, addressing different student needs and ensuring sound learning opportunities for every student.

Using a variety of instructional, assessment, and evaluation strategies, teachers provide numerous opportunities for students to develop skills of inquiry and communication and to acquire marketable business skills while learning fundamental concepts. The activities offered should enable students to relate and apply these concepts to economic, technological, and social circumstances and ethical issues in the world in

which they live. Opportunities to relate knowledge and skills to these broader contexts will motivate students to learn and to become lifelong learners.

Principals: The principal works in partnership with teachers and parents to ensure that each student has access to the best possible educational experience. To support student learning, principals ensure that the Ontario curriculum is being properly implemented in all classrooms using a variety of instructional approaches. They also ensure that appropriate resources are made available for teachers and students. To enhance teaching and learning in all subjects, including business studies, principals promote learning teams and work with teachers to facilitate teacher participation in professional development activities. Principals are also responsible for ensuring that every student who has an Individual Education Plan (IEP) is receiving the modifications and/or accommodations described in his or her plan – in other words, for ensuring that the IEP is properly developed, implemented, and monitored.

2.3 Cooperative Learning Strategy

Cooperative learning is one of the recommended teaching-learning techniques in which students achieve learning goals by helping each other in a social setting. Teaching and learning both are the main inter-related processes in the classroom. The importance of teaching method or instructional program is measured by its effectiveness, while the value of learning depends upon its application in the daily life. According to Amosun (2002) a number of research works have been carried out on the efficacy of cooperative learning in Nigeria. Such studies include Adeyemi (2002). More recently, Omosehin (2003) investigated the effects of a training programme in cooperative learning of pre-

service teachers' classroom practice and students learning outcomes in Business Studies. It was the conclusion of all these studies that cooperative learning strategies seem more useful than other instructional strategies.

Cooperative learning is the instructional use of small groups in which students work together to maximize and gain from each other (Johnson and Johnson, 2009). In cooperative learning, students are expected to help, discuss and argue with each other; assess each other's current knowledge; and fill any gaps in each other's understanding (Slavin, 2005). Bruffe (2006) saw cooperative learning as a set of process which helps people interact together in order to accomplish a specific goal or develop an end product which is usually content specific. Kagan (2008) provided an excellent definition of cooperative learning by looking at general structures which can be applied to any situation. His definition provides an umbrella for work of cooperative learning specialist. He states inter-aila, that the structural approach to cooperative learning is based on the creation, analysis and systematic application of structures, or content free ways of organizing social interaction in the classroom. Moreover, cooperative learning involves a small team to solve a problem, complete a task or accomplish a common goal (Newman, nath and rock, 2009).

There are many different cooperative learning techniques; however, all of them have certain elements in common as established by Johnson, Johnson and Holubec (2008). These elements are the ingredients necessary to ensure that when students do work in groups, they work cooperatively; first, the members of a group must perceive that they are part of a team and that they all have a common goal; second, group members must realize that the problem they are to solve is a group problem and that the success or

failure of the group will be shared by all members of the group; third, to accomplish the group's goal, all students must talk with one another to engage in discussion of all problems; finally, it must be clear to all that each member's individual work has a direct effect on the group's success. Team work is utmost important.

One important reason for the inconsistent implementation of the cooperative learning is an imperfect understanding of what the method really is. The study by Sparapani (2007) showed that teachers learn about cooperative learning incidentally rather than intentionally. Studies concerning how teachers actually use cooperative learning in the classroom also suggest that attention needs to be paid to training the essential features of cooperative learning (Anhil, Jekins, Wagne &Vadasy, 2009; Johnson & Johnson, 2009). For teachers to acquire cooperative strategies, they most first be incorporated into teacher education programmes and demonstrated accordingly. Moreover the instructional techniques should be placed at the core educational curriculum to promote academic performance and development of appropriate social skills (Hillkrirk, 2009). History of cooperative learning is examined in 2.3.1 as follows.

2.3.1 History of Cooperative Learning

Prior to World War II, social theorists such as Allport, Watson, Shaw, and Mead began establishing cooperative learning theory after finding that group work was more effective and efficient in quantity, quality, and overall productivity when compared to working alone. However, it was not until 1937 when researchers May and Doob found that people who cooperate and work together to achieve shared goals, were more

successful in attaining outcomes, than those who strived independently to complete the same goals.

Furthermore, they found that independent achievers had a greater likelihood of displaying competitive behaviours. Philosophers and psychologists in the 1930s and 40's such as John Dewey, Kurt Lewin, and Morton Deutsh also influenced the cooperative learning theory practiced today. Dewey believed it was important that students develop knowledge and social skills that could be used outside of the classroom, and in the democratic society.

This theory portrayed students as active recipients of knowledge by discussing information and answers in groups, engaging in the learning process together rather than being passive receivers of information (e.g. teacher talking, students listening). Lewin's contributions to cooperative learning were based on the ideas of establishing relationships between group members in order to successfully carry out and achieve the learning goal. Deutsh's contribution to cooperative learning was positive social interdependence, the idea that the student is responsible for contributing to group knowledge. Since then, David and Roger Johnson have been actively contributing to the cooperative learning theory. In 1975, they identified that cooperative learning promoted mutual liking, better communication, high acceptance and support, as well as demonstrated an increase in a variety of thinking strategies among individuals in the group.

Students who showed to be more competitive lacked in their interaction and trust with others, as well as in their emotional involvement with other students. In 1994 Johnson and Johnson published the 5 elements (positive interdependence, individual accountability, face-to-face interaction, social skills, and processing) essential for

effective group learning, achievement, and higher-order social, personal and cognitive skills for example; problem solving, reasoning, decision-making, planning, organizing, and reflecting. Below are the types of cooperative learning:-

2.3.2 Types of Cooperative Learning

There are three types of cooperative learning according to Brown and Parker (2009), the types are formal, informal and group-based cooperative learning as briefly discussed in the following:

(a) Formal Cooperative Learning

Formal cooperative learning consists of students working together, for one class period to several weeks, to achieve shared learning goals and complete jointly specific tasks and assignment. According to Johnson, Johnson, and Holubec, (2008) informal cooperative learning groups the teachers' role includes:

1. Making pre-instructional decisions. Teachers (a) formulate both academic and social skills objectives, (b) decide on the size of groups, (c) choose a method for assigning students to groups, (d) decide which roles to assign group members, (e) arrange the room, and (f) arrange the materials students need to complete the assignment. In these pre-instructional decisions, the social skills objectives specify the interpersonal and small group skills students are to learn. By assigning students roles, role interdependence is established. The way in which materials are distributed can create resource interdependence. The arrangement of the room can create environmental

interdependence and provide the teacher with easy access to observe each group, which increases individual accountability and provides data for group processing.

2. Explaining the instructional task and cooperative structure. Teachers (a) explain the academic assignment to students, (b) explain the criteria for success, (c) structure positive interdependence, (d) structure individual accountability, (e) explain the behaviors (i.e., social skills) students are expected to use, and (f) emphasize intergroup cooperation (this eliminates the possibility of competition among students and extends positive goal interdependence to the class as a whole). Teachers may also teach the concepts and strategies required to complete the assignment. By explaining the social skills emphasized in the lesson, teachers operationalize (a) the social skill objectives of the lesson and (b) the interaction patterns (such as oral rehearsal and jointly building conceptual frameworks) teachers wish to create.

3. Monitoring students' learning and intervening to provide assistance in (a) completing the task successfully or (b) using the targeted interpersonal and group skills effectively. While conducting the lesson, teachers monitor each learning group and intervene when needed to improve taskwork and teamwork. Monitoring the learning groups creates individual accountability; whenever a teacher observes a group, members tend to feel accountable to be constructive members. In addition, teachers collect specific data on promotive interaction, the use of targeted social skills, and the engagement in the desired interaction patterns. This data is used to intervene in groups and to guide group processing.

4. Assessing students' learning and helping students process how well their groups functioned. Teachers (a) bring closure to the lesson, (b) assess and evaluate the quality and quantity of student achievement, (c) ensure students carefully discuss how effectively they worked together (i.e., process the effectiveness of their learning groups), (d) have students make a plan for improvement, and (e) have students celebrate the hard work of group members. The assessment of student achievement highlights individual and group accountability (i.e., how well each student performed) and indicates whether the group achieved its goals (i.e., focusing on positive goal interdependence). The group celebration is a form of reward interdependence. The feedback received during group processing is aimed at improving the use of social skills and is a form of individual accountability. Discussing the processes the group used to function, furthermore, emphasizes the continuous improvement of primitive interaction and the patterns of interaction need to maximize student learning and retention.

(b) Informal Cooperative Learning

Informal cooperative learning consists of having students work together to achieve a joint learning goal in temporary, ad-hoc groups that last from a few minutes to one class period (Johnson, Johnson, and Holubec, 2008). During a lecture, demonstration, or film, informal cooperative learning can be used to focus student attention on the material to be learned, set a mood conducive to learning, help set expectations as to what will be covered in a class session, ensure that students cognitively process and rehearse the material being taught, summarize what was learned and precede the next session, and provide closure to an instructional session. The teacher's role for

using informal cooperative learning to keep students more actively engaged intellectually entails having focused discussions before and after the lesson (i.e., bookends) and interspersing pair discussions throughout the lesson. Two important aspects of using informal cooperative learning groups are to (a) make the task and the instructions explicit and precise and (b) require the groups to produce a specific product (such as a written answer). The procedure is as follows according to Johnson, Johnson and Holubec (2008)

1. **Introductory Focused Discussion:** Teachers assign students to pairs or triads and explain (a) the task of answering the questions in a four to five minute time period and (b) the positive goal interdependence of reaching consensus. The discussion task is aimed at promoting advance organizing of what the students know about the topic to be presented and establishing expectations about what the lecture will cover. Individual accountability is ensured by the small size of the group. A basic interaction pattern of eliciting oral rehearsal, higher-level reasoning, and consensus building is required.

2. **Intermittent Focused Discussions:** Teachers divide the lecture into 10 to 15 minute segments. This is about the length of time a motivated adult can concentrate on information being presented. After each segment, students are asked to turn to the person next to them and work cooperatively in answering a question (specific enough so that students can answer it in about three minutes) that requires students to cognitively process the material just presented. The procedure according to Johnson, Johnson and Holubec (2008) is:

a. Each student formulates his or her answer.

b. Students share their answers with their partner.

c. Students listen carefully to their partner's answer.

d. The pairs create a new answer that is superior to each member's initial formulation by integrating the two answers, building on each other's thoughts, and synthesizing.

The question may require students to:

a. summarize the material just presented.

b. give a reaction to the theory, concepts, or information presented.

c. predict what is going to be presented next; hypothesize.

d. solve a problem.

e. relate material to past learning and integrate it into conceptual frameworks.

f. resolve conceptual conflict created by presentation.

Teachers should ensure that students are seeking to reach an agreement on the answers to the questions (i.e., ensure positive goal interdependence is established), not just share their ideas with each other. Randomly choose two or three students to give 30 second summaries of their discussions. Such individual accountability ensures that the pairs take the tasks seriously and check each other to ensure that both are prepared to answer. Periodically, the teacher should structure a discussion of how effectively the pairs are working together (i.e., group processing). Group celebrations add reward interdependence to the pairs.

3. Closure Focused Discussion: Teachers give students an ending discussion task lasting four to five minutes. The task requires students to summarize what they have learned from the lecture and integrate it into existing conceptual frameworks. The task may also point students toward what the homework will cover or what will be presented in the next class session. This provides closure to the lecture.

Informal cooperative learning ensures students are actively involved in understanding what is being presented. It also provides time for teachers to move around the class listening to what students are saying. Listening to student discussions can give instructors direction and insight into how well students understand the concepts and material being as well as increase the individual accountability of participating in the discussions.

(c) Cooperative Base Groups

Cooperative based groups are long-term, heterogeneous cooperative learning groups with stable membership (Johnson, Johnson, and Holubec, 2008). Members' primary responsibilities are to (a) ensure all members are making good academic progress (i.e., positive goal interdependence) (b) hold each other accountable for striving to learn (i.e., individual accountability), and (c) provide each other with support, encouragement, and assistance in completing assignments (i.e. primitive interaction). In order to ensure the base groups function effectively, periodically teachers should teach needed social skills and have the groups' process how effectively they are functioning. Typically, cooperative base groups are heterogeneous in membership (especially in terms of achievement motivation and task orientation), meet regularly (for example, daily or biweekly), and last for the duration of the class (a semester or year) or preferably for several years. The agenda of the base group can include academic support tasks (such as ensuring all members have completed their homework and understand it or editing each other's essays), personal support tasks (such as getting to know each other and helping each other solve nonacademic problems), routine tasks (such as taking attendance), and

assessment tasks (such as checking each other's understanding of the answers to test questions when the test is first taken individually and then retaken in the base group).

The teacher's role in using cooperative base groups is to (a) form heterogeneous groups of four (or three), (b) schedule a time when they will regularly meet (such as beginning and end of each class session or the beginning and end of each week), (c) create specific agendas with concrete tasks that provide a routine for base groups to follow when they meet, (d) ensure the five basic elements of effective cooperative groups are implemented, and (e) have students periodically process the effectiveness of their base groups.

The longer a cooperative group exists, the more caring their relationships will tend to be, the greater the social support they will provide for each other, the more committed they will be to each other's success, and the more influence members will have over each other. Permanent cooperative base groups provide the arena in which caring and committed relationships can be created that provide the social support needed to improve attendance, personalize the educational experience, increase achievement, and improve the quality of school life. The integrated use of cooperative learning will be discussed below:-

Integrated use of all three Types of Cooperative Learning

These three types of cooperative learning may be used together (Johnson, Johnson, and Holubec, 2008). A typical class session may begin with a base group meeting, which is followed by a short lecture in which informal cooperative learning is used. The lecture is followed by a formal cooperative learning lesson. Near the end of

the class session another short lecture may be delivered with the use of informal cooperative learning. The class ends with a base group meeting. Below are the elements of cooperative learning.

2.3.3 Elements of Cooperative Learning

Cooperative learning has five elements. These elements according to Siltala (2010) are:

1. Positive interdependence

Students must fully participate and put forth effort within their group

Each group member has a task/role/responsibility therefore must believe that they are responsible for their learning and that of their group

2. Face-to-Face Primitive Interaction

Member promote each other's success

Students explain to one another what they have or are learning and assist one another with understanding and completion of assignments

3. Individual and Group Accountability

Each student must demonstrate master of the content being studied

Each student is accountable for their learning and work, therefore eliminating "social loafing"

4. Social Skills

Social skills that must be taught in order for successful cooperative learning to occur include effective communication, interpersonal and group skills

i. Leadership

ii. Decision-making

iii. Trust-building

iv. Communication

v. Conflict-management skills

5. Group Processing

Every group must often assess their effectiveness and decide how it can be improved. In order for student achievement improvement considerably, two characteristics must be present a) Students are working towards a group goal or recognition and b) success is reliant on each individual's learning. All these are elements of cooperative learning strategy. Below is the Problem-solving strategy:

2.4 Problem-solving Strategy

Problem solving involves taking series of actions in the process of an investigation that seeks to bridge the gap between a problem state and the anticipated goal (Jackson, 2005). A problem-solving strategy therefore comprises action steps taken by the learner to reach anticipated goal when faced with a problem situation, problem solving means engaging in a task for which the solution method is not known in advance. Yewande (2000) was of the opinion that problem solving is using information and reasoning to overcome obstacle barrier.

Problem solving is the highest form of learning (klausmeier and Goodwin, 2003). Since the individual defines new idea based on this process, likewise, it is well known

that when faced with a problem one needs knowledge of rules, on the one hand, and the capacity to use them, on the other thus achieving transfers of learning, being able to solve problems, then, enables persons to their environment and to modify it in part (Sernano, Cantu and Vila, 2003).

Teaching students to solve problems is based on the hypothesis that knowledge is organized and stored in memory in a sequential and logical networks (Anderson, 2002) and hence it can be retrieved in a stepwise and sequential manner to solve problems(Selvaratnam, 2003). This then means that for successful solution of problem knowledge alone may not be sufficient. The knowledge of how the conceptual knowledge should be applied (problem-solving skills) in solving problem is equally important. This form of knowledge is called the procedural knowledge (West, Framer and Wollif, 2001) on which the theory of problem-solving strategy is based.

Problem-solving as a teaching strategy has been used with degree of success in social sciences (Adewuya, 2009 and Orji, 2008). Though, research on problem-solving strategies and appears to be copious in Business studies literature, there is still paucity of such research in business studies in Nigeria. Furthermore, Adewuya (2009) has suggested that problem-solving strategies could be employed to effect changes in attitude towards Business studies. Based on this suggestion therefore, it is possible that a generalized problem-solving teaching strategy in education which could be applied successfully, in teaching problem solving in different Education discipline may as well facilitate students' performance in Business studies. The present study is aimed at verifying this speculation.

Problem Solving can be referred to as a process of finding answers or approaching solutions creatively. This process requires the learner to be totally

involved in the learning process. Okoli (2011) defined problem solving as the process of applying previously acquired knowledge to obtain a satisfactory solution to new and unfamiliar problems. The free encyclopedia Wikipedia (2010) defined problem solving as a mental process and is part of the larger problem that includes problem finding and problem shaping. Consider the most complex of all intellectual function; problem solving has been defined as higher-order cognitive process that requires the modulation and control of more routine or fundamental skills. This means that students need to develop critical thinking abilities to be able to solve problems.

It is in relation to the aforementioned statement that Snyder and Snyder (2007) stated that critical thinking skills are important because they enable students to deal effectively with social, scientific and practical problems. Simply put, students who are able to think critically are able to solve problems effectively. Bhardwaj (2000) saw problem solving as the process of applying a method-not known in advance to a problem that is subject to a specific set of conditions and that the problem solver has not seen before, in order to obtain a satisfactory solution. Orphan and Ruhan (2006) expressed that the problem solving method of teaching is an active learning process where learners' learn according to their own needs and pace. Also Ajoma opined that problem solving is an advanced method of teaching and learning, and since it involves making observations, investigations and data gathering for solving problems. According to Ajoma (2009) it appears scientific and it helps both the teachers and students of business education to learn new concepts and ideas through problem solving, leading to discovery, apply previous knowledge to solve problems in Business education and identify problem areas of students based on what they have learnt. Therefore, the importance of problem solving strategy is discussed as follows:

2.4.1 The Importance of Problem Solving

The importance of problem solving method of teaching cannot be over emphasized. Problem solving method turns students from passive listeners of information receivers to active, free self-learner and problem solvers. It also shifts the emphasis of Educational programs from teaching to learning. According to Gallagher, Stephien, Sher and Workman (1999) in problem solving learning environment, students act as professionals and are confronted with problems that require clearly defining and well structured problems, developing hypothesis, assessing, analyzing, utilizing data from different sources, revising initial hypothesis as the data collected developing and justifying solutions based on evidence and reasoning.

They further stated that the practice of problem based learning is richly diverse as educators used problem solving method as an educational tool to enhance learning as a relevant and practical experience, to have students' problem solving skills and promote students' independent learning skill. Similarly Eng (2001) opined that the aim of problem-solving learning is to design and deliver a total learning environment that is holistic to student-centered and student empowerment. Presenting students with a problem, give them the opportunity to take risks, to adopt new understandings, to apply knowledge, to work in context and to enjoy the thrill of being discoverers.

Tick (2007) stated that in the student-centered learning environment that is desirable for problem based learning, the central figure of the learning-teaching process is the student. The learning objective is not the reproduction, recall and learning of passively

received learning material but the active and creative engagement of students in group work and in individual study thus transferring the skills and knowledge.

Also, Celuch and Slama (1999), Daz-lefebore (2004), and Kang and Howren (2004) reported that research supports the premise that lecture and memorization do not lead to long term knowledge or the ability to apply that knowledge to new situations, hence, the importance of the problem solving method of teaching.

Another importance of problem solving is noted by Snyder and Snyder (2008) that problem solving activities promotes critical thinking and problem-solving skills; active participation in the learning process including self direction, identification of own learning needs, team work, creative discussion, and learning from peers; and the integration and synthesis of a variety of knowledge role of the teacher in problem-solving is discuss below;

2.4.2 The Role of the Teacher in Problem Solving

The most important achievement of a teacher is to help his/her students along the road to independent learning. In the use of problem solving method, the teacher acts just as facilitator, rather than a primary source of information or dispenser of knowledge. Roh (2003) argued that within problem based learning environments, teachers instructional abilities are more critical than in the traditional teacher-centered classrooms. Beyond presenting the subject knowledge to the students, teachers in problem based learning environments must engage students in marshalling information and using their knowledge in applied sand real settings.

Snyder and Snyder (2008) said that critical thinking is what teachers need to teach their students so as to be able to utilize the problem-solving techniques effectively. Davis, Riley and Fisher (2003) observed that although business education students perceive critical thinking as an important skill, they typically do not know how to think critically. Students are not born with the ability to think critically. Therefore instructors who wish to integrate this skill in their classroom experiences must first model the behavior (Hemming, 2000). Students must learn how to think critically before they can apply the skill to content scenarios. Modeling can be demonstrated in a discussion setting by asking a question and "walking students through" the process of critically thinking (Snyder and Snyder, 2008). Below are barriers to use of problem-solving strategy.

2.4.3 Barriers to the Use of Problem- Solving strategy

Several issues have been raised by researchers as barriers or obstacles to the use of problem-solving method in our schools. Wong (2007) observed that the current educational trend to standardize curricular and focus on test in the classroom. The emphasis is on "teaching to the test" distracts the learning process from student-centered instruction and places the emphasis on the content. To him, if the focus is on learning, students should be given the freedom (and responsibility) to explore content, analyze resources, and apply information.

Snyder and Snyder (2008) identified four barriers which often impede the use of problem-solving method (i) Lack of training, (ii) Lack of information, (iii) preconceptions, and (iv) time constraints. First, teacher often are not trained in problem solving methodology (Broadbear, 2003). Also, Scriven and Paul (2007) observed that

elementary and secondary teachers know their content and receive training in them. Other teaching strategies is being discus in 2.5

2.5 Other Teaching Strategies

There are various methods and techniques a teacher can adopt in presenting the lessons to the students depending on the subject matter being taught. The popular methods and techniques which are adopted in teaching Business Studies according to Mills (2000) are as follows:

(a) Scaffolding Method: This is a situation where by a teacher transforms learners by assigning tasks to the learners which they cannot handle alone without his intervention. Raymond (2000) defined instructional scaffolding teaching method as the process of problem solving confined on learners heavily and weightily by solution by the teacher. This however means that learners with all their energy put in, in providing solution to a problem or to a task cannot without the assessor. Olson and Prath (2000) observed that instructional scaffolding is a teaching method that emphasizes on the introduction of new skills by engaging students, collaboratively in tasks that will be too hard for them to complete on their own. This method involves individual student to brainstorm on how to provide solution to problem with the help of the assessor.

(b) Demonstration Method: This is usually a (traditional method) used by the teacher to illustrate a procedure to be followed Leroy and Herbert (2002).This invariably means the way and manner problems ought to be followed to the logical conclusion. According to Ndanwu and Ukwo (2005) all agreed that typewriting, accounting and shorthand to be properly taught, the teachers demonstration by all means is very

important. This however shows the students the various manipulations of the machines figures, symbols and even signs which include what is to be done and why it is done.

(c) Discussion Method: It is a useful way of instruction and of stimulating thought and interest in a topic or subject (Mills, 2000). Discussion can often be more effective than the field trip method making students think and in contributing their own ideas. It must not only be carefully controlled by the teacher but also requires individual preparation by the students (Harrison, 2000).This is an instructional method that embodies the democratic properties and processes of free guided and purposeful expression of views and ideas on a given issue, problem or situation (Mkpa, 2004). He further revealed that it has the merit of encouraging learners to depend on their ability to think than on the teacher.

(d) **Questioning Method:** This method of teaching was invented by Socrates. Highet (2009) described it as a strategy where the teachers ask questions and the pupils talk. The questions are so arranged as to make the pupil conscious of his own ignorance and help guide the pupil towards a deeper truth. It is believed that such truth learned are held firmly because they've not been presented to the child readymade but drawn out of his own mind with the help of the teacher.

(e) **Role Playing:** Popham, Schrag and Blockhus (2008) believed that both the performers and the observers have specific responsibilities. The performers present their solutions, either spontaneously or after a planning session, while the non-performers develop criteria for evaluation. This is a method of teaching where students are made to act out certain roles in the class like the roles of secretaries, receptionists and the part played by executives in taking decisions concerning management problems and

situations (Harrison, 2000). In any role playing, only a small group of students are actively involved while the other members of the class watch what goes on. The participants are usually absorbed while the others remain passive except as they think about and discuss the role playing.

(f) **Group Work:** This is an opportunity for students to meet together briefly in relatively small groups of four to seven to share with each other opinions, view points and reactions. The group technique can be applied to basic Accounting classes Popham, Schrag and Blockhus (2008). This method provide an opportunity for all to participate in a way that is not possible in a total class situation, they also help students learn the skills of listening as well as talking and students learn to think in action while interacting with each other.

(g) **Programmed Instruction:** This method is defined as a step by step approach that is highly adaptable to adult learning. It is reading source frequently used to assist individual students in learning (Popham, Schrag and Blockhus, 2008). Material is presented in small segments, requiring the student to supply an answer or a word to complete the sense and providing immediate feedback in the form of the correct answer. The programmed must have clear objectives stated in behavioural terms and great care must be taken in breaking it down in to a planned sequence and in formulating the question so that they are stimulating but not so hard as to be discouraging. Programmed materials appear in various formats – answers printed upside down, on the next page or in a column designed to be uncovered by sliding an opaque mask (Popham, Schrag and Blockhus , 2008)

(h) **Practice and Drill:** In this method, students repeatedly perform the desired act until they reach an acceptable degree of competency (Onwuka, 2001). Their achievement at each level provides them with sense of satisfaction which in turn spurs them on to practice further the desired learning activities. Onwuka (2001), Popham, Schrag and Blockhus (2008), all agreed that this method is necessary when students are expected to acquire a skill or some proficiency in performing some specific act. This method is therefore very effective in the teaching and learning of typewriting, Accounting and Shorthand.

(i) **Field Trip Method:** Field trip according to Popham, Schrag and Blockhus (2008) is used to designate any organized excursion which is taken by school pupils as an integral part of their academic work and primarily for educational purpose. It is also defined as an educational activity in which a school group leaves the classroom and goes out into the community to the actual source of information. Field trip enable students to see concrete illustrations of classroom theory; to reinforce understandings developed from reading and discussion; to see, smell and touch or hear the objects or processes previously described, to enter into conversation with the people who are actively engaged in business; to ask questions that might not arise in the classroom. Below are learning styles which are discuss in 2.6

2.6 Learning Styles

Individuals are different and they do things differently. These differences apply also to the issue of learning. People learn in different ways. Learning style according to Vesser, Vreken and Mcchlery (2006) referred to a person's preferred approach to learning.

To them, students learn in different ways: and the approach they prefer may be an important determinant in their academic performance. It was further explained that students' learning context is a broad term which encompasses a variety of student-related variables, other.

As such educators need to adopt approaches to teaching and assessment that enable students with different learning styles to learn effectively. Sangster (2006) opined that teachers need to create a suitable mix of different learning opportunities to ensure that the largest possible number of students can learn effectively and identifying individual students learning characteristics may help educators to improve their course design and choose helpful and appropriate learning outcomes, modes of delivery and assessment. Duff (2008) has identified different agendas among the advocates of learning style measurement. One of such agenda is matching an individual's learning style preference to specific learning activities in order to improve learning outcomes, but also to counteract weaknesses in an individual's learning style. This is done to deal with Educational tension, including mismatching, which may stretch learners educationally.

Other researchers argued that mismatching can help learners to overcome weaknesses in their cognitive styles, to develop a more integrated approach to their learning (Rush and Moore, (2001). According to Kowoser and Berman (2006) research showed that providing mismatches in teaching and learning styles can stimulate learning and flexibility in learning. Vaugham and Baker (2001) agreed that matching may lead to learners becoming bored. Much has been written and there is a long-standing debate on the relationship between teaching and learning styles and their impact on students' performance. Ford and Chen (2001) noted that numerous studies suggested that learning in

matched conditions may, in certain contexts, be significantly more effective than learning in mismatched conditions.

Liu and Reed (2004) suggested that understanding the variables associated with successfully matching learning styles may prove to have a significant impact on learning achievement. However, Zhang (2006) consented that the literature on teacher/student style match/mismatch contains somewhat ambiguous findings, some arguing the benefits of the match, whilst others contend that the effect of matching is insignificant. Despite the argument for match/mismatch of students learning styles to specific learning activities, it will be necessary for teachers to be conversant with students different learning styles which include among others: the learning style of Kolb, and Honey and Mumford identified by Vesse, Vreken and Mcchlery (2006) which are Activist, Reflector, Theorist and Pragmatists.

i. activists: act first and consider the consequences later.
ii. reflector: prefer to ponder their experiences, observing them from different perspectives.
iii. theorists: try to adapt and integrate experiences into logical, complex theories.
iv. pragmatists: enjoy trying out new ideas, theories and techniques to see if they work in practice.

Each individual has a unique combination of the four learning styles mentioned above it then becomes critical for teachers to study and know their students so as to be able to

help them. Feder and Silverman (2004) developed Feder's model of learning styles which has four dimensions. Processing (Active/Reflective), Perception (Sensing/intuitive), Input (visual/verbal), and Understanding (sequential/global).

Active/reflective dimension: active learners understand new information by doing something with it, while reflective learners prefer to think about new information before acting on it.

i. sensing/intuitive dimension: sensing learners are concrete, practical and oriented towards facts and procedures solving problems by well-established methods. They are uncomfortable with abstract and theoretical information. While, intuitive learners prefer to discover possibilities and relationships themselves; and they are innovative in their approach to problem-solving.

ii. visual/verbal: visual learners understand and retain information best when they see visual representations of course material. While verbal learners understand new information best through written and spoken words.

iii. sequential/global learners: sequential learners understand new information in linear logical steps, while global learners learn in large leaps and think holistically.

2.7 Review of Related Empirical Studies

The following empirical studies related to this research work were reviewed.

Rosini (2000) conducted research on the effects of . Cooperative leaning methods on achievement, retention, and attitudes of Home Economics students in Enugu. The objectives of the study were to determine the effects of cooperative learning approach of Students' Teams Achievement divisions (STAND) on the achievement of content knowledge, retention and attitudes towards the teaching method. Cooperative leaning was compared to non cooperative (competitive learning classroom structure using a quasi – experimental design). An achievement test, consisting of items from the state competency test – item bank for the course, and an attitude questionnaire were administered immediately following instruction in the unit of special national needs. Research questions were formulated. The population of the study consisted of home economics students in senior secondary schools in the central region of Enugu, with ninety-one (91) students in the cooperative learning group and one hundred and six (106) students in the non cooperative learning group. Achievement test scores and first semester grades home economics class were used as analysis of covariates to adjust for possible pre existing difference between the groups preliminary analysis of covariance showed no significant different among the dependent variables and the teaching methods used. There was also no significant difference in student attitude toward the teaching methods. The findings of the study also include that. Cooperative leaning was found to be effective than non . Cooperative leaning group with respect to home economics students' achievement and retention.

The current research is related to the work in that they are both on problem-solving strategy in secondary school. The literature review of the research work was of importance to the current research and some of them were used in the current research. However, the researcher failed to formulate Null hypotheses to further probe into the research questions.

Adeyemi (2005) carried out a study on the effects of cooperative learning and problem –solving strategy on Junior Secondary School students' achievement in social studies Osun State. The objectives of the work include determining the effects of cooperative learning and conventional strategies. The design used for the study was pre-test post –test control group non randomized quasi – experimental design. The study made use of 150 students that were selected using stratified cluster sampling technique. Instrument used for the study are:

i. Social studies achievement test with a split-half reliability coefficient of 0.78.
ii. Instrument packaged on cooperative training strategy with a split half reliability index of 0.92.
iii. Instrument package on problem solving strategy with a split half reliability index of 0.84.

The researchers used Analysis of Covariance (ANCOVA) to analyze the data from the post-test and pretest. The findings of the study include among others that cooperative learning group had a higher adjusted post-test mean score of 11.89, this means that the cooperative learning group perform better.

Although the work was on effects of cooperative learning and conventional strategies on junior secondary school students' achievement in social studies, is related to

current research, because both research work are on the cooperative learning strategy. Also, both studies are on the same level (Junior Secondary School) as the current research derived a lot of literature from the work of Adeyemi. However, Adeyemi would have used randomized experimental design for better control of extraneous variables.

Shefali (2009) conducted research on interactive effect of cooperative learning model and leaning goals of students on academic achievement of students in mathematics. The study seeks to ascertain whether cooperative learning model is equally effective for students with mastery and performance goals. The study uses quasi-experimental and factorial design for conducting the experiment. The experiment was conducted on one hundred and fifty three (153) students of junior secondary schools. It used two tools, achievement test in mathematics and learning goals inventory both develop by the researcher. The techniques used to test the hypotheses include the t-test, ANOVA and ANCOVA. The findings of the study include among others that; cooperative learning group was found to be better than the conventional group in performance.

The researcher used large population and better statistical tools used as such a good result emerged, which was helpful for the current research study. However, the work was helpful to this current research work as it drew the attention of the researcher to some of the teaching strategies. However this research was based on mathematics which is a science subject on like the present research that is a pre-vocational subject.

In addition, Gokhan (2010) conducted a research on the effect of cooperative learning on students' approach to general gymnastics course and academic achievements for universities students at AgricIbraham Cecen University (AGRI) Turkey. The

purpose of the research was to determine the effective of two different teaching methods over students' academic achievements and their general approach to gymnastics class and also to weight students' opinions about the cooperative learning method. The subject of the study was made up 50 university students. Treatment groups were selected randomly for this research. The following instruments were used for data collection: the leaning style inventory (LSI), the gymnastics academic achievement test (GAAT), Gymnastic practicing evolution forms (GPEF), the gymnastics attitude scale (GAS) and the student opinion scale (SOS). The data collected were subject to analysis using Ch-square for data set from LSI test; descriptive statistic and one MANOVA for pre-test and post-test data from the GAAT and GPEF tests, and independent sample t-test for data sets from GAS'S Liker type questions. The findings of the study include that, theoretical and practical skills of students who are exposed to the cooperative learning improve greater than those of the students who were exposed to the traditional learning.

The research work is related to the current research in that, they are both on effect of teaching strategies on student performance but on different levels of education. It is useful to the current research because it explained the methods of teaching which the current research used some of them. However, the sample population was too small if not better findings would have resulted.

Okoli (2011) carried out a study on the comparative study of using problem – solving and teacher demonstration methods on students' performance in financial accounting, a case study of secondary schools in Gombe State. The researcher raised four purposes for the study which included; comparing the performance of students taught with the conventional method; determine the differences in the performance of

students taught with problem – solving method and those taught with teacher – demonstration method. Four research questions were also stated. The researcher used experimental research design. The researcher had two treatment group (problem-solving and demonstration groups) and one control group (conventional lecture method) of 30 subjects each group. Financial Accounting Test I and II (FAT I and II) were administered to determine the performance of the students. The findings of the study include that problem solving group performed better than the other groups.

The work of Okoli (2011) is related to the current research because both works are on problem-solving method. The work was helpful to this current research work as the current research drew most of the problem-solving literature from it. However, Okoli found that there is significant difference in the performance of the students in the three groups, but she failed to run a further Post Hoc test like, Ducan, sheffe and others to find the group that caused the difference.

In another study conducted by Muhammad (2011) on effect learning Academic Achievement of Secondary School Students in Mathematics in Borno State. The study had four specific objectives which included; to examine the effects of cooperative learning on the academic achievement of low – achievers in mathematics at secondary level. Research questions were not stated and the researcher used experimental research design in the methodology. The population for the study was fifty-three (53) students only. Reliability was determined by using spearman – Brown's prophecy formula. Analysis of variance was used to test the treatment effects for high and low achievers of the experimental and control groups on post – test and retention tests. The findings of the study include among others experimental group students perform significantly better than

the control group students. . However, the previous research did not use random technique in selecting the sample.

The current research is related to the work of Muhammad (2011) because they both studied cooperative learning strategies. The previous research explained cooperative method extensively which the researcher made used of some for review of literature. The researcher's findings and recommendation helped the current research in the choice of objectives. However the total population for this study was small which may not represent the population effectively.

2.8 Summary of Review of Literature

Business studies as a discipline which is an instruction in running a business, especially, the financial and managerial aspects. Business studies have been developing in Nigeria since the pre-colonial era till now. This chapter reviewed literature related to the study. The review highlighted the historical development of business studies. Also learning styles which of course differ from individual to individual were identified. It further highlight the importance of effective teaching which has to do with the ability of the teacher to select and use appropriate strategies of teaching that will bring about the achievement of the stated objective of the lesson. A number of teaching strategies for Business Studies teachers were identified, the review includes: Conventional, demonstration, problem – solving, discussion, field – trip, project and cooperative strategies. These teaching are grouped into teacher centered and learner – centered. Again the chapter discussed in detail the problem – solving strategy of teaching which allows the leaner to use their previous knowledge to handle problem and the cooperative

leaning strategy provides opportunity for students to develop skills in group interaction and in working with others. The past researches reviewed were carried out on various topics such as: effects of cooperative learning on academic achievement of secondary school students in mathematics in Borno Statae, Comparative study of using problem-solving and teacher demonstration methods on students' performance in financial accounting and others.

In addition, to the review of related literature above, the researcher observed that, there were gaps that the previous research did not fill such as assessing the relative effectiveness of the teaching strategies, the level and age most appropriate for the teaching strategies to be used and also they the strategy most appropriate for the male and for the female students. Therefore, the current study has assessed the relative effectiveness, level and gender most appropriate for these teaching strategies. These are the gaps the current study has filled.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

This chapter described the area of the study and procedures employed in carrying out the study. Therefore, the chapter focused on the following sub – headings:

3.1. Research Design

3.2. Population for the Study

3.3. Sample Size and Sampling Procedure

3.4. Instrument for Data Collection

3.4.1Validity of the Instrument

3.4.2 Pilot Study

3.4.3 Reliability of the Instrument

3.5. Data Collection Procedure

3.6. Procedure for Data Analysis

3.1 Research Design

The research design for this study was pre-test post-test quasi-experimental design. Quasi-experimental design deals with intact groups, this makes it natural. It is a design which does not allow for maximum control of extraneous variables. The intact nature of the groups minimizes artificiality that the true experimental design is known for; as a result, the study can be carried out without the participants' knowledge of participating in an experiment. In line with Olayiwola,(2007).the design may or may not

use control group; this solves the problem of difficulty in looking for a comparable group Emmanuel, (2003).

3.2 Population for the Study

The population for the study comprised JSS II students from public Junior Secondary Schools in Kaduna State. There are 373 public Junior Secondary Schools in Kaduna State with a total population of thirty-nine thousand, two hundred and twenty seven (39,227) JSS II students made up of seventeen thousand, four hundred and fourteen(17,414) males and fourteen thousand, four hundred and twenty six (14,426) females. There are twelve Educational Zone in Kaduna State, which the researcher further regrouped them into three Senatorial Zone according to their local government areas. They are northern Zone, central Zone and southern Zone. Appendix G shows the enrolment in Public Junior Secondary School by level, gender and Local Government Educational Area.

The breakdown of the population for the study is as shown in Table 3.1

Table 3.1: Population for the Study

S/N	Senatorial Zones	Number of Schools	No. of Male Students	No. Of Female Students	Total No. Of Students
1.	Northern	114	8,217	4,145	16,613
2	Central	86	6219	6307	12,525
3	Southern	115	2978	3974	9458
Total		**373**	**17,414**	**14,426**	**39,227**

Source: Nigerian Educational Management Information System, checked by Kaduna State Ministry of Education (2010)

3.3 Sample Size and Sampling Procedure

Simple random sampling technique was used to select two schools from one Senatorial Zone, it is purposive because it's an experimental research which allowed the choice of school close for effective study and also for proper control of extraneous variables the two schools selected are Government Junior Secondary School chikaji, for both Cooperative Learning and problem-solving groups (fifteen students for each of the strategy), Government Junior Secondary School, Jama'a for both Problem-Solving and cooperative learning groups (fifteen students for each of the strategy)

From the two Junior Secondary Schools, a total number of sixty (60) students were selected. This comprised of thirty (30) males and thirty (30) females students who

were randomly selected and randomly assigned to the two groups; that is Experimental group one, Experimental group two and thirty (30) students selected from each school. This is in line with Gay and Dielhi (2002) who suggested a sample size of thirty (30) subjects minimum out of a population for the groups in an experimental study, depending on the environment and the available facilities to be used. Roscoe (2002) also stated that a small sample size from the parent population for an experimental design is convenient. The breakdown of the sample size is given in Table 3.2

Table 3.2 Sample Size for the Study

Senatorial zone	Schools	population	Male students	Female students	Total number of students
Northern	Government Junior Secondary School Chikaji	128	15	15	30
	Government Junior Secondary School Jama'a	120	15	15	30
	Total	248	30	30	60

The procedure for selecting the thirty students from the population of each school was done through the use of intact samples in their natural setting was used. The whole class was use for the pre-test, after the pre-test students that had scores of 16marks and above were selected through simple random sampling using hat drawn technique. The researcher wrote 'Yes' and 'No' on pieces of papers. These papers were folded in scramble form and put in a container, shaken very well then the students were asked to pick one each. The researcher wrote 30 'Yes' in pieces of paper in the schools where the study was undertaken.

Those who picked 'Yes' were used for the study. The same procedure was used to select fifteen male students and fifteen female students who were use for both strategies that is fifteen each making thirty students from each school.

3.4 Instrument for Data Collection

Based on the fact that the research study is a quasi- experimental research design, The topic used for this study was trade this because it is a topic that has foundation to business studies and is common in the content of Business studies curriculum.

A lesson plan was prepared as a guide for both cooperative learning and problem-solving strategies for effective teaching of the topic stated above. Details of the lesson plans are shown in appendices (B1-B7). After which a Business Studies Achievement Test (BSAT) was designed by the researcher which was administered for both the pre-test and also for the post-test.

The test consist of two sections; A and B. Section A consisted of twenty (20) objective questions which carried 3marks each giving a total of 60 marks for this section

while sections B consisted of three essay questions to answer any two. Each question in section B carried 20 marks giving a total of 40 marks. The details of the instrument are shown in appendices C and D.

3.4.1 Validity of the Instrument

In order to ensure that the instrument measures, what it is supposed to measure, it was given to senior lecturers in the Department of Vocational and Technical Education, Ahmadu Bello University, Zaria to vet for relevance of the questions to the topic to be taught. They critically examined the instruments with respect to their fitness for the purpose of this study. Their corrections and suggestions improved the instrument structure and format. Then the instrument was used for the purpose it is meant for.

3.4.2 Pilot Study

A pilot study of the instrument was conducted in Government Junior Secondary school, Funtua in Katsina state which is not the study area. According to Emmanuel, (2013). Who state that a pilot study is carried out in different study area so far the characteristics is similar to the study area. In line with this, Government Junior Secondary School, Funtua was chosen for the pilot study because it shares the same characteristics with the study area and the school offers Business Studies which is related to the area of study. The pilot study was conducted to obtain the reliability of the instrument. The scripts were collected at the end of the test and marked by the researcher. The result gotten was then used to test for the reliability of the instrument.

3.4.3 Reliability of the Instrument

The reliability of the instruments was determined by the statistical analysis of the data collected from the pilot study. The split-half method was used, where the instrument was divided into two halves of 'odd' and 'even' numbers. The reliability of one half (odd) was determined using Spearman Rank Correlation Coefficient, while the reliability of the whole instrument was determined using Spearman Brown Prophecy formula. A reliability coefficient of 0.86 was calculated for the instrument. This reliability coefficient is high and positive the instrument was adjusted reliable and stable. According to Olayiwole(2010) recommendation, who stated that a reliability estimate of 0.60 and above is high and the instrument for which it is calculated is reliable and stable.

3.5 Procedure for Data Collection

The researcher obtained letter from school authorities for permission to conduct the study in all affected secondary schools. This is found in appendix (A).

The Pre-test on Business Studies was administered to the two groups in the two schools that were used for the study during their first lesson which lasted for 1hour each. The researcher administered the pre-test to the two groups in the schools. This was done with the help of three research assistants so as to ensure objectivity in the supervision/ invigilation. With the aid of a lesson plan experimental group one was exposed to instructional package based on cooperative learning strategy. Students were grouped into five groups each. Experimental group two was exposed to instructional package based on problem-solving strategy. This is in line with Abiola,(2010). Who stated that

experimental group can be divided into groups or sections for effective control in the processes of conducting the research work.

The treatment lasted for four weeks of three periods of thirty-five minutes per period per week. The researcher and three other research assistants handled the treatments conditions in all the schools. At the end of the treatment, Junior School Business Studies Achievement Test (BSAT) was administered to the students.

Details of pre-test and post- test questions with their marking schemes as shown in appendices C and D and the scores for the test is found in appendices E and F.

3.6 Procedure for Data Analysis

The mean performance of students for pre-test and post-test for the experimental groups were computed and compared to answer all research questions. Mean, Standard deviation (SD) and standard error (SE) were used to analyze the data that were collected to answer the research questions. The t-test statistics was used to test the null hypotheses one, two, three and four. The t-test has proved to be one of the most effective methods of comparing two group means Nworgu, (2001). The t-test variation is required for comparison of two means of same group in a pre-test – post-test situation.

All the null hypotheses were tested at 0.05 level of significance (P = 0.05). If the calculated value of t-test is greater than the critical value of t-test the null hypothesis was rejected otherwise it was retained.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

This chapter is the presentation and analysis of data that was carried out in the study. The chapter focused on the following sub-headings;

4.1 Analysis of Data to Answer Research Questions

4.2 Testing of Null Hypotheses.

4.3 Discussion of Findings.

4.4 Summary of major findings.

4.1 Analysis of Data to Answer Research Questions

Analysis of students' performance in business studies achievement tests for pre test and post tests were used in answering the four research questions. The analysis is presented in Tables 4.1.1 to 4.1.4

Research Question One *What is the per-test and post-test scores of business studies students taught Business Studies using cooperative learning strategies?*

The Data to answer research question one were analyzed in Table 4.1.1

Table 4.1.1 Mean and Standard deviation for analysis of research question one (1)

Cooperative learning Strategies	N	Mean	SD	SE
Pre test	30	43.93	5.78	1.06
Post test	30	76.47	8.86	1.62

Source: Field Study, 2013

Based on the data presented in Table 4.1.1, there were thirty students each,

In pre-test and post-test of cooperative learning strategy group. The pre-test group had a mean of 43.93, Standard Deviation (S.D) of 5.78 and Standard Error of mean (S.E) of 1.06). On the other hand, the post-test group had a mean of 76.47, Standard Deviation (S.D) of 8.86 and Standard Error (S.E) of 1.62 Comparing the mean of students performance in the pre-test and post-test of cooperative learning, it could be seen that the post-test students of cooperative learning strategy had mean performance of 76.47 which is greater than the mean of 43.93 for pre-test scores of cooperative learning strategy. The post-test scores was better than the pre-test scores of the same cooperative learning strategy. The mean difference showed that the post-test performance scores for the students was better than the pre-test scores by 32.54 mean differences.

2. **Research Question Two***: What is the pre-test and post-test result of business studies students taught Business Studies using problem-solving instructional strategies?*

The data to answer research question two was analyzed in Table 4.1.2

Table 4.1.2 Mean and Standard deviation for analysis of research question two (2)

Problem-solving Strategies	N	Mean	SD	SE
Pre-test	30	33.73	4.13	0.75
Post-test	30	64.40	7.40	1.35

Source: Field Study, 2013

Furthermore the data presented in Table 4.1.2, shows that there were also thirty students each in pre-test result and post-test result of students in problem –solving strategy. The pre-test result of students performance in problem-solving strategy had a mean of 33.73, Standard Deviation (S.D) of4.13 and Standard Error of mean (S.E) of 0.75). On the other hand, the post-test results of students performance in problem-solving strategy had a mean of 64.40, Standard Deviation (S.D) of 7.40 and Standard Error (S.E) of 1.35 Comparing the mean of students result performance in the pre-test and post-test of problem-solving, it could be seen that the post-test students result had mean performance of 64.40 which is greater than the mean of 33.73 for pre-test students results of problem-solving strategy. The post-test students performed better than the pre-test students of the same problem-solving strategy. The mean difference showed that the post-test result was better than the pre-test scores by 30.67 mean differences

Research Question Three: *What is the difference in the post-test performance scores of Business Studies students taught business studies using cooperative instruction strategy and those taught using problem-solving instructional strategy?*

The data to answer research question three was analyzed in Table 4.1.3

Table 4.1.3 Mean and Standard deviation for analysis of research question three (3)

Pre-test Post-test	N	Mean	SD	SE
Cooperative learning	30	76.47	8.86	1.62
Problem-solving	30	64.40	7.40	1.35

Source: Field Study, 2013

Also data presented in Table 4.1.3, has thirty students each in post-test cooperative learning and post-test problem-solving strategies groups. The post-test cooperative learning strategy scores for business studies had a mean of 76.47, Standard Deviation (S.D) of 8.86 and Standard Error of mean (S.E) of 1.62) . On the other hand, the post-test problem-solving strategy scores had a mean of 64.40, Standard Deviation (S.D) of 7.40 and Standard Error (S.E) of 2.35 Comparing the mean of post-test scores of cooperative learning strategy and post-test scores of problem-solving strategy, it could be seen that post-test scores of cooperative learning strategy had mean performance of 76.47. This is greater than the mean of 64.40 for post-test scores of problem-solving strategy. The post-test scores of cooperative learning strategy performed better than the post-test scores performance in problem-solving strategy. The mean difference showed that the post-test cooperatives learning performance was better than the post-test problem-solving performance of 12.07 mean differences.

4 Research Question Four*:* *What is the pre-test and pos-test difference between male and female students taught Business Studies using cooperative instructional strategy and those using problem-solving strategy?*

The data to answer research question four was analyzed in Table 4.1.4

Table 4.1.4 Mean and Standard deviation for analysis of research question four (4)

Gender(cooperative and problem-solving strategies)	N	Mean	SD	SE
Male	60	56.97	19.90	2.57
Female	60	52.30	15.95	2.06

Source: Field Study, 2013

The data presented in Table 4.1.4, there were sixty pre-test and post-test male and female students each in pre-test and post-test for cooperative learning and problem-solving strategies groups. The male and students pre-test post-test for cooperative learning strategy had a mean of 56.97, Standard Deviation (S.D) of 19.90 and Standard Error (S.E) of 2.57. On the other hand the male and female students pre-test and post-test for problem-solving strategy group had a mean of 52.30, Standard Deviation (S.D) of 15.95 and Standard Error (S.E) of 2.06. it could be seen that the pre-test post-test for male and female students for cooperative learning strategy 56.97 which is greater than the mean of 52.30 for male and female pre-test, post-test for problem-strategy students scores. The male and female students pre-test, post-test for cooperative learning strategy performed better than the male and female students pre-test, post-test for problem-solving strategy. The mean difference showed that the male and female students' for pre-test, post-test performance for cooperative learning was better than the male and female students' performance in pre-test, post-test problem-solving strategy with 4.47 mean differences.

4.2 Testing of Null Hypotheses

Four null hypotheses were postulated for the study to further probe into the research questions. Therefore, the pre-test post-test scores of students' performance were tested at 0.05 level of significance and the result interpreted. The null hypotheses were tested using sample t-test statistics. The test of the hypotheses were presented in Tables 4.2.1 to 4.2.4

Null Hypothesis One*: the per-test and post-test scores of Business Studies students taught business studies using cooperative method of instruction will not differ significantly.*

The summary of the result is as presented in table 4.2.1

Table 4.2.1 t-test for analysis of Null Hypothesis one (1)

Cooperative learning Strategies	**N**	**Mean**	**SD**	**t-cal**	**Df**	**t-crit**	**P-Value**	**Decision**
Pre-test	30	43.93	5.78					
				17.475	29	1.96	0.00	S*
Post-test	30	76.47	8.86					

Source: Field Study, 2013

*Significant

P<0.05

Table 4.2.1 showed the result of t-test used for testing the significant difference between the pre-test post-test scores performance of students for cooperative learning

strategy. The data from the Table revealed that the pre-test scores performance of students for cooperative learning strategy had a mean score of 43.93, Standard Deviation (S.D) of 5.78 While the post-test scores performance of cooperative learning strategy had a mean score of 76.47, Standard Deviation (S.D) of 8.86. The t-calculated was 17.48 while t-critical was1.96 since the t-calculated 17.48 was greater than the t-critical 1.96, it implied that there was a significant differences between the pre-test scores and post-test scores performances of students taught business studies using cooperative learning strategy. Therefore, the null hypothesis one that states that the pre-test, post-test of cooperative learning will not differ significant was rejected

Null Hypothesis Two*: the pre-test and post-test scores of Business Studies students taught using problem-solving method of instructional strategies will not differ significantly.*

The summary of the result is as presented in table 4.2.2

Table 4.2.2 T-test for analysis of Null Hypothesis two (2)

Problem-solving Strategies	**N**	**Mean**	**SD**	**t-cal**	**Df**	**t-crit**	**P-Value**	**Decision**
Pre-test	30	33.73	4.13			1.96		
				17.854	29		0.00	S*
Post-test	30	64.40	7.40					

Source: Field Study, 2013

*Significant

P<0.0

Table 4.2.2 showed the result of t-test used for testing the significant difference between the pre-test post-test scores performances of students taught using problem-

solving strategy. The data from the Table revealed that the pre-test scores problem-solving strategy of teaching business studies had a mean score of 33.73, Standard Deviation (S.D) of 4.13 . While the post-test scores for problem-solving strategy had a mean score of 64.40, Standard Deviation (S.D) of 7.40. The t-calculated was 17.85 while t-critical was1.96. Since the t-calculated 17.85was greater than the t-critical, it implied that there was significant differences between the pre-test and post-test performances of students taught using problem-solving strategy. Hence, the null hypothesis two that states that pre-test and post-test scores performance for problem-solving strategy will not differ significantly was rejected.

Null Hypothesis Three: *there is no significant difference on the post-test performance scores of students taught Business Studies by using cooperative instruction strategy and those taught using problem-solving strategy.*

The summary of the result is as presented in table 4.2.3

Table 4.2.3 T-test for analysis of Null Hypothesis three (3)

Post-test	**N**	**Mean**	**SD**	**t-cal**	**Df**	**t-crit**	**P-Value**	**Decision**
Cooperative learning	30	76.47	8.86					
				5.997	29	1.96	0.00	S*
Problem-solving	30	64.40	7.40					

Source: Field Study, 2013

*Significant

P<0.05

Table 4.2.3 showed the result of t-test used for testing the significant difference between the post-test performances scores of cooperative learning strategy and the post-test performance scores of problem-solving strategy. The data from the Table revealed that the post-test scores of cooperative learning strategy had a mean score of 76.47, Standard Deviation (S.D) of 8.86. While the post-test for problem-solving strategy had a mean of 64.40. The t-calculated was 5.997 while t-critical was1.96. Since the t-calculated 5.997 was greater than the t-critical1.96. Therefore, the null hypothesis three that states there is no significant differences in the post-test performance scores taught using cooperative learning strategy was rejected

Null Hypothesis Four: *there is no significant difference in the post-test performance scores of male and female Business Studies students taught business studies using cooperative instructional strategy and those using problem-solving strategy.*

The summary of the result is as presented in table 4.2.4

Table 4.2.4 T-test for analysis of Null Hypothesis four (4)

post-test cooperativelearning and problem-solving(Gender	**N**	**Mean**	**SD**	**t-cal**	**Df**	**t-crit**	**P-Value**	**Decision**
Male	30	74.40	11.33	4.029	29	1.96	0.076	S*
Female	30	66.47	6.90					

Source: Field Study, 2013

* Significant

P<0.05

Table 4.2.4 showed the result of t-test used for testing the significant difference in the post-test performances scores of male and female students taught business studies using cooperative learning instruction and problem-solving strategy. The data from the Table revealed that the male and female students' who are taught using cooperative learning strategy had a mean score of 74.40 and Standard Deviation (S.D) of 11.33 and The t-

calculated was 4.03while t-critical was1.96. Since the t-calculated 4.03 was greater than the t-critical 1.96. While the male and female students' taught using problem-solving strategy of teaching business studies had a mean score of 66.47 and Standard Deviation (S.D) of 6.90. It implied that there was a significant difference between the performances of male and female students taught business studies using cooperative learning strategy. Therefore, the null hypothesis four that states that there is no significant differences in the post-test performance scores of male and female students taught business studies using cooperative learning and problem-solving strategy was rejected.

4.3 Discussion of findings

This research work was specifically carried out to assess the relative effectiveness of cooperative learning and problem-solving strategies in the performance of junior secondary school students in business studies in Kaduna State. In order to achieve the purpose, four specific objectives, research questions and research hypotheses were raised. The first research question stated that what is the per-test and post-test scores of business studies students taught Business Studies using cooperative learning strategies?

And the null hypotheses one states that the per-test and post-test scores of Business Studies students taught business studies using cooperative method of instruction will not differ significantly.

The study found that there was significant mean difference between the pre-test, post-test performances scores of cooperative learning strategy. The post-test performance

scores for cooperative learning strategy performed significantly better than the pre-test performance scores with a mean difference of 32.54

This finding is in line with Okebukola (2010), Alebiosu (2008), Esan (2008), Johnson and Johnson(2009) and Omosehin(2003) who found that cooperative learning strategy is suitable in teaching students especially at the middle age because they found the method interesting. Also Johnson and Holubee (2009) stated that students do well when they work together. This findings agreed with Hillkirk,(2003) who suggested that cooperative learning should be placed as core in the educational curriculum due to its effectiveness in teaching and learning processes.

The second research question also states that, What is the pre-test and post-test result of business studies students taught Business Studies using problem-solving instructional strategies?

And the null hypotheses one states that the pre-test and post-test scores of Business Studies students taught using problem-solving method of instructional strategies will not differ significantly.

The study also revealed that there was significant mean difference between the pre-test performances result of problem-solving strategy and the post-test performance scores of problem-solving strategy. The post-test performance result of problem-solving group was found to performed better than the pre-test performance result of problem-solving strategy with a mean difference of 30.67.This finding is in line with Dewey's(2003) who stated that problem-solving strategy is an active strategy which enables the students to become aware of and determine his/her problem solving ability

and learning needs. Also, Lofty (2003), Herrid (2003) and Lambros (2002) stated that problem-solving in this present era, is most extensively used nearly in all areas. It has also been observed that research studies focused on the use of problem based learning in elementary, secondary and higher education. This in line with Ajoma(2009) who stated that lecture method should be discourage in our secondary schools.

Among the two methods compared in this study, Cooperative learning was found to be the best; the problem-solving strategy came last. This implied that cooperative learning strategy is the most effective teaching strategy among the two teaching strategies (cooperative learning and problem-solving) in this research. This is in line with Adeyemi (2008) who found that cooperative learning strategy is the best strategy in teaching in secondary schools.

The third research question states that what is the difference in the post-test performance scores of Business Studies students taught business studies using cooperative instruction strategy and those taught using problem-solving instructional strategy?

And the null hypotheses also state that will there be any significant difference on the post-test performance scores of students taught Business Studies by using cooperative instruction strategy and those taught using problem-solving strategy.

As regards the post-test performances scores of students taught using cooperative learning and the post-test problem-solving strategies the post-test performance for cooperative learning students had higher performance mean score of 76.47 as against the post-test performance scores problem-solving mean score of 64.40 the post-test

performance scores of cooperative learning strategies had a mean difference of 12.07. This finding is supported by Kerka (2000) who found that male students cooperate better than their female counterparts and that is why they always do better under cooperative learning strategy.

The fourth research question state that what is the pre-test and pos-test difference between male and female students taught Business Studies using cooperative instructional strategy and those taught using problem-solving strategy?

And the null hypotheses states that will there be any significant difference in the pre-test post-test performance scores of male and female Business Studies students taught business studies using cooperative instructional strategy and those using problem-solving strategy.

Male and Female students pre-test post-test performance in cooperative learning strategy and male and female students performance scores in problem-solving.the male and female pre-test and post-test had a mean score of 56.97 as against a mean score of 52.30 for male and female pre-test post-test performance scores students in problem-solving strategy. Mean difference of 4.47 for male and female pre-test post-test for cooperative learning. Furthermore, performance of male and female students for pre-test post-test in cooperative learning strategy shows that cooperative learning strategy is the best teaching instructional strategy for both male and female.

4.4 Summary of Major Findings

The following are the major findings of the study:

a. The study found that there was significant mean difference between the pre-test post-test performances scores of cooperative learning strategy. The post-test performance scores for cooperative learning strategy performed significantly better than the pre-test performance scores with a mean difference of 32.54

This implied that post-test performance scores of students was better than the pre- test performance scores of students for both cooperative learning strategies.

b. there was significant mean difference between the pre-test performances result of problem-solving strategy and the post-test performance scores of problem-solving strategy. The post-test performance result of problem-solving group was found to perform better than the pre-test performance result of problem-solving strategy with a mean difference of 30.67. This implied that post-test performance scores of students for problem-solving was better than the pre-test performance scores of students for problem-solving strategy.

C. there was significant mean difference between the post-test performances scores of cooperative learning strategy and the post-test performance scores of problem-solving strategy. The post-test performance scores of cooperative group was found to performed better than the post-test performance result of problem-solving strategy with a mean difference of 12.07. This implied that post-test performance scores of students in cooperative learning instruction are better than the post-test performance scores of students for problem-solving strategy.

d. There was significant difference between the mean performance of male and female pre-test and post-test of students taught using cooperative learning and problem-solving strategy. Male and female students for cooperative learning performed better with mean difference of 4.47 above the male and female students who were taught using pre-test and post-test problem-solving strategy.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter comprises of the summary, conclusion and recommendations of the research study. Therefore, the chapters focus on the following sub-headings:

5.1 Summary.

5.2 Conclusion.

5.3 Recommendations.

5.4 Limitations of the Study.

5.5 Suggestions for further studies.

5.1 Summary

The study was on assessment of relative effectiveness of cooperative learning and problem-solving strategies on the performances of junior secondary school students in Business Studies in Kaduna state. The major objective of the study was to assess the relative effectiveness of cooperative learning and problem-solving strategies on the performances of junior secondary school students in Business Studies in Kaduna state.

The study has four specific objectives among which include; to determine the per-test and post-test performance of students who are taught Business Studies using cooperative learning strategies.

In line with these specific objectives, four research questions were raised which include; What is the per-test and post-test performance of students who are taught Business Studies using cooperative learning strategies?

Based on these four research questions, four null hypotheses were formulated which included; the per-test and post-test scores of Business Studies students taught business studies using cooperative method of instruction will not differ significantly.

Review of related literature was presented under relevant sub-headings.

Qausi- experimental design was adopted for the study. 39,227 JSSII students formed the population for the study from which a sample sixty students (60) was selected for the study through random sampling. Thirty students were randomly selected from the schools used for the study since the work is an experimental study. The selected students were randomly assigned to the two groups using hat drawn technique. The instrument used for data collection was a Business Achievement Test (BAT). The data collected from the students were statistically analyzed using mean, standard deviation and standard error for the research questions. The null hypotheses were tested using the t-test at 0.05 level of significance.

The following are the major findings of the study:

a. The study found that there was significant mean difference between the pre-test post-test performances scores of cooperative learning strategy. The post-test performance scores for cooperative learning strategy performed significantly better than the pre-test performance scores with a mean difference of 32.54.

This implied that post-test performance scores of students are better than the pre- test performance scores of students for both cooperative learning strategies.

b. there was significant mean difference between the pre-test performances result of problem-solving strategy and the post-test performance scores of problem-solving strategy. The post-test performance result of problem-solving group was found to perform better than the pre-test performance result of problem-solving strategy with a mean difference of 30.67. This implied that post-test performance scores of students are better than the pre-test performance scores of students for problem-solving strategy.

C. there was significant mean difference between the post-test performances scores of cooperative learning strategy and the post-test performance scores of problem-solving strategy. The post-test performance scores of cooperative group was found to performed better than the post-test performance result of problem-solving strategy with a mean difference of 12.07. This implied that post-test performance scores of students in cooperative learning instruction are better than the post-test performance scores of students for problem-solving strategy.

d. There was significant difference between the mean performance of male and female pre-test and post-test of students taught using cooperative learning and problem-solving strategy. Male and female students for cooperative learning performed better with mean difference of 4.47 above the male and female students who were taught using pre-test and post-test problem-solving strategy.

5.2 Conclusion

The result of this study has provide an empirical basis that cooperative learning strategy is an alternative teaching strategy capable of improving the present dismal and poor performance of students in business studies. It is therefore evident that the use of cooperative learning strategy enhanced students' performance in real sense than problem-solving strategy.

In conclusion, since the lecture method is the mostly used method in all the levels of our educational system, it means that the poor performance experienced is no longer a surprise. If this is the case, it means that students performance in higher level will be affected, which will translate to poor performance at work place and consequently hamper the economic growth of the nation.

5.3 Recommendations

Based on the findings and conclusion of the study, the following recommendations are made by the researcher:

Based on the findings and conclusion to research question one which revealed that cooperative learning strategy is the best strategy for teaching business studies in our junior secondary school for better performance, therefore;

i Teachers should use more of cooperative learning strategy in teaching of Business Studies in order to improve the performance of students.

ii Students should be encouraged by the teachers and school authorities to work together cooperatively instead of stressing the competitive method of learning.

This will help the students to learn fast, makes the lesson enjoyable, builds cooperation between friends, keeps students active, diminishes the need to memorize information, and lead students to search and find information.

iii The longer a cooperative group exists, the more caring their relationships will tend to be, the greater the social support they will provide for each other, the more committed they will be to each other's success, and the more influence members will have over each other so cooperative learning should be encourage in the teaching and learning of business studies.

iv Cooperative learning should be emphasize in the teaching and learning of business studies because it provides the arena in which caring and committed relationships can be created that provide the social support needed to improve attendance, personalize the educational experience, increase achievement, and improve the quality of school life of the students.

V Students should be made to participate fully and put forth effort within their group when they are given assignment to carry out ,in such that Each group member has a task therefore must believe that they are responsible for their learning and that of their group

Based on the findings and conclusion to research question two which revealed that students taught using post-test problem-solving strategy also perform slightly better .

Vi the teacher should help the students along the road to independent learning.

Vii teachers must engage students in marshalling information and using their knowledge in applied sand real settings.

Based on the findings and conclusion to research question three which revealed that performance for post-test students taught using cooperative learning strategy perform better than the performance for post-test students taught using problem-solving strategy for teaching business studies in the junior secondary school. Therefore;

Viii Teachers of business studies should encourage male student by given them assignments in groups so they can learn to study together by sharing ideas with one another.

ix female students should also be encourage by their teacher to learn together cooperatively for effective learning to take place since cooperative learning is the best teaching strategy for business studies in junior secondary school.

Based on the findings and conclusion to research question four which revealed that male and female students taught using cooperative learning strategy perform slightly better than the male and female students taught using problem-solving strategy for teaching business studies in junior secondary school. Therefore;

x female and male students can also be taught using problem solving in the absence of cooperative instructional strategy since problem solving strategy turns students from passive listeners of information receivers to active, free self-learner and problem solvers. It also shifts the emphasis of Educational programs from teaching to learning.

xi male and female students should be taught using problem solving because Presenting students with a problem, gives them the opportunity to take risks, to adopt new understandings, to apply knowledge, to work in context and to enjoy

the thrill of being discoverers.

In the absence of cooperative learning strategy, problem-solving strategy should be the next option in the teaching of business studies since is the next option after cooperative learning strategy.

5.4 Limitations of the Study

During the course of this work, a number of limitations were experienced by the researcher among which are;

1. There was difficulty in organizing the students for cooperative learning strategy since they were not used to the teaching strategy.
2. The work involved printing of questions for pre-test and post-test of which some of the question papers were destroyed or rejected by the students and these were replaced. These took the researcher longer time in collecting the relevant data.

5.5 Suggestions for Further Studies

The researcher suggests that further studies can be carried out on similar topic in other states of the federation for the purpose of generalization. Other suggestions include:

1. Effect of cooperative learning strategy on the performance of students in Business studies.
2. A comparative study of problem solving and the lecture strategies in the teaching of Business Education courses in colleges of education.

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DEPARTMENT OF VOCATIONAL & TECHNICAL EDUCATION
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*Your Ref:*_____

Our Ref: M.ED/EDUC/04036/2010-2011

Date: 30th June, 2014

Letter of Introduction

TALATU MUTUAH – M.ED/EDUC/04036/2010-2011

This is to certify that the above mentioned name is a Postgraduate student (M.Ed Business Education) in the Department of Vocational and Technical Education, Ahmadu Bello University, Zaria, carrying out a research topic: ***Assessment Of The Relative Effectiveness Of Cooperative Learning And Problem –Solving Strategies of Junior Secondary School Students' Performance In Business Studies In Kaduna State, Nigeria***

Please, kindly give her every assistance she may require

DEPT. OF VOCA & TECH. EDUCA... FACULTY OF EDUCATION

Professor A.A. Udoh
HEAD OF DEPARTMENT

APPENDIX B1
COOPERATIVE LEARNING STRATEGY LESSON PLAN

DATE: 30th June, 2014

SCHOOL: Govt. Junior Secondary School Jama'a/Chikaji

SUBJECT: Business Studies

TOPIC: Trade

CLASS: Jss two (2)

TIME: 10:00-10:35am

DURATION: 35 minutes

General Objective: By the end of the topic students should be able to define trade.

Specific Objective: :- i. Students should be able to state the meaning of trade

ii. List out types of trade

iii. Define Home Trade

iv. List out types of Home trade

Preparation/Teaching Aids

MATERIALS:- e.g. charts of items that cloud be seen in the market, pictures of people involving in buying and selling in different parts of the world.

INTRODUCTIONS – The lesson will be introduced by teacher ask students the following questions :

i. Have you been to a market environment?

ii. What and who did you see in the market doing?

iii. What were the people you saw in the market doing?

PRESENTATION:- The lesson will be presented using the following steps:

STEP I:- Teacher presents the topic by explaining the term trade to the students thus;

The term trade refers to exchange of goods and services with one another.

STEP II:- Teacher will group the students in five per group

STEP III:- Teacher asked each group to study in their groups and write out in their books the component of trade thus as:-

i. Trade involves one person and goods

ii. Monetary include such as cash or credit ,that is to be paid in future.

STEP IV:- Group are also going to look out for the boundaries of internal trade particularly state

STEP V:- Students are also to look out for the problems of internal trade thus as; insecurity, lack of raised price of commodity, price instability for commodity, lack of close substitute of commodities in the market.

EVALUATION:- The teacher evaluates the lesson thus as:-

i. Asking a student in a group to defined internal trade

ii. State two problems of internal trade answer thus as;

iii. List the component of trade

CONCLUSION:- The teacher will conclude the lesson thus as:

- You remember I told you the definition of trade is…….....
- You also remember I told you that the component of ……
- You remember I told you that the problems of internal trade are ……

ASSIGNMENT:-Read the following topics for the next lesson.

- What is foreign trade?
- Component of foreign trade and problems of foreign trade

References

Remark:- Is the topic achievable?

Answer:- yes it is achievable.

APPENDIX B2

COOPERATIVE LEARNING STRATEGY LESSON PLAN FOR SECOND LESSON

DATE: 7th JULY, 2014

SCHOOL: Govt. Junior Secondary School Jama'a/Chikaji

SUBJECT: Business Studies

TOPIC: Trade

SUB-TOPIC: Foreign Trade

CLASS: Jss two (2)

TIME: 10:00-10:35am

DURATION: 35 minutes

General Objective:- By the end of the topic, students should be able to define foreign Trade .

Specific Objectives:- i. Students should be able to state the meaning of foreign trade

ii. List out types of foreign trade

iii .Defined import and export

iv. Give examples of goods and services that are exported from the country and those that are imported.

Preparation/Teaching Aids

MATERIALS:- e.g. charts of items that cloud be seen in the market, pictures of people

INTRODUCTIONS – The lesson will be introduced by teacher by asking students question thus as:

i How many of you have cars in their home?

ii How many have television set?

Iii do we manufacture them in Nigeria?

PRESENTATION:- The lesson will be presented using the following steps:

STEP I:- Teacher present her topic by explaining the term foreign trade to the students:

Foreign Trade:- foreign trade is sometimes called external trade. It is trade which takes place between two countries. Economists call it **international trade**.

STEP II:- Teacher will go round the groups to find out if they have answer the questions given to them during their first class.

STEP III:- find out the types of foreign trade, types of foreign trade and how they all work

STEP IV:- Group are also going to look out for the boundaries of international trade particularly state

STEP V:- each group will be asked to write out what they have found out on foreign trade.

EVALUATION:- lesson will be evaluated by the teacher by asking students questions based on what they have found out during the process of their reading

i. What is another name for foreign trade?

ii. Explain how import takes place?

iii. How does balance of trade takes place?

CONCLUSION:- Teacher conclude the lesson thus as:

- You remember you found out what foreign trade is…….
- You remember what types of foreign trade are ……
- You also remember what balance trade deficit is……..……
- You also remember what the problems of foreign trade are ……

Lesson ended by given them home work

ASSIGNMENT:-

- What are aids to trade?
- List out the invisible items in Nigeria balance of payment.
- What are the role of customs and excise in foreign trade?

SELF EVALUATION

Remark:- Is the topic achievable?

Answer:- Yes is achievable.

APPENDIX B3

COOPERATIVE LEARNING STRATEGY LESSON PLAN FOR THIRD LESSON

DATE: 14th JULY, 2014

SCHOOL: Govt. Junior Secondary School Jama'a/Chikaji

SUBJECT: Business Studies

TOPIC: Trade

SUB-TOPIC: Aids to Trade

CLASS: Jss two (2)

TIME: 10:00-10:35am

DURATION: 35 minutes

General Objective:- By the end of the topic, students should be able to state what aid to trade is .

Specific Objectives:- i. Students should be able to state what aid to trade are.

ii. Define balance of payment

iii .classify balance of payment

iv. list out the role of customs and excise in foreign trade.

Preparation/Teaching Aids

MATERIALS:- e.g. charts of items that cloud be seen in the market, pictures of people

INTRODUCTIONS – The lesson will be introduced by teacher by asking students question thus as:

i how many of you have been to the post office?

ii what do people do in the bank?

Iii what are the duties of the customs officers?

PRESENTATION:- The lesson will be presented using the following steps:

STEP I:- Teacher present her topic by explaining the term aids to trade to the students:

Aids to trade: aids to trade are many but we are going to consider balance of payment, invisible items such as shipping services, financial services and so on .Banking, insurance, advertising and communication aids trade.

STEP II:- Teacher will go round the groups to find out if they have answer the questions given to them during their second class.

STEP III:- find out ways in which the banks, insurance communication aids trade.

STEP IV:- Group are also going to list out the role of customs and excise in foreign trade.

STEP V:- each group will be asked to write out what they have found out on aids to trade

EVALUATION:- lesson will be evaluated by the teacher by asking students questions based on what they have found out during the process of their reading

iv. There are many aids to trade list three of them.

v. List out the examples of invisible trade.

vi. The role of customs and excise in foreign trade are?

CONCLUSION:- Teacher conclude the lesson thus as:

- You remember you found out what aids to trade are…….
- You remember you have found out roles of banking and others……
- You also remember you have found out role of customs and excise in foreign trade as……..

Lesson ended by given them home work

ASSIGNMENT:

Go over all your notes in preparation for achievement test in the next class

SELF EVALUATION

Remark:- Is the topic achievable?

Answer:- Yes is achievable.

APPENDIX B4

PROBLEM-SOLVING STRATEGY LESSON PLAN

DATE: 30th June, 2014

SCHOOL: Govt. Junior Secondary School Jama'a/Chikaji

SUBJECT: Business Studies

TOPIC: Trade

CLASS: Jss two (2)

TIME: 10:00-10:35am

DURATION: 35 minutes

General Objective:- By the end of the topic, students should be able to defined Trade correct.

Specific Objectives:- i. Students should be able to state the meaning of trade

ii. List out types of trade

iii.Defined Home Trade correctly

iv. List out types of Home trade

Preparation/Teaching Aids

MATERIALS:- e.g. charts of items that cloud be seen in the market, pictures of people

INTRODUCTIONS – The lesson will be introduced by teacher asking students question thus as:

i. Have any of you been to a market environment

ii. What and who did you see

PRESENTATION:- The lesson will be presented using the following steps:

STEP I:- Teacher present her topic by explaining the term trade to the students:

TRADE:- Trade take place when one thing is exchanged for another. Before money was invented, people used to exchange goods for goods. This type of trade is known as trade by barter.

STEP II:- Teacher gave the students the other sub-topic to find out on their own by giving them guide on how to go about it.

STEP III:- find out the types of trade, definition of home trade, types of home trade and how they all work

STEP IV:- Group are also going to look out for the boundaries of internal trade particularly state e.g. Kano and Lagos

STEP V:- Teacher told students read it out and also to write out what they have seen on the topic given above

EVALUATION:- lesson will be evaluated by the teacher by asking students questions based on what they have found out during the process of their reading

vii. What is another name for Home trade?

viii. Explain how trade by batter works?

ix. Two types of trade are?

Home trade id of two types, name them

CONCLUSION:- Teacher conclude the lesson thus as:

- You remember you found out what trade is ……..
- You remember what types of trade are ……
- You also remember that the types of home trade by batter is……
- You also remember that the types of Home trade are ……

Lesson ended by given them home work

ASSIGNMENT:-

- What is foreign trade?
- How many groups has foreign trade?
- What is balance of trade
- Balance of trade deficit

SELF EVALUATION

Remark:- Is the topic achievable?

Answer:- Yes is achievable.

APPENDIX B5

PROBLEM-SOLVING STRATEGY LESSON PLAN

SECOND LESSON

DATE: 7th JULY, 2014

SCHOOL: Govt. Junior Secondary School Jama'a/Chikaji

SUBJECT: Business Studies

TOPIC: Trade

SUB-TOPIC: Foreign Trade

CLASS: Jss two (2)

TIME: 10:00-10:35am

DURATION: 35 minutes

General Objective:- By the end of the topic, students should be able to define foreign Trade .

Specific Objectives:- i. Students should be able to state the meaning of foreign trade

ii. List out types of foreign trade

iii .Defined import and export

iv. Give examples of goods and services that are exported from the country and those that are imported.

Preparation/Teaching Aids

MATERIALS:- e.g. charts of items that cloud be seen in the market, pictures of people

INTRODUCTIONS – The lesson will be introduced by teacher by asking students question thus as:

i How many of you have cars in their home?

ii How many have television set?

Iii do we manufacture them in Nigeria?

PRESENTATION:- The lesson will be presented using the following steps:

STEP I:- Teacher present her topic by explaining the term foreign trade to the students:

Foreign Trade:- foreign trade is sometimes called external trade. It is trade which takes place between two countries. Economists call it **international trade**.

STEP II:- Teacher will ask students to explain what they have been asked to read during their first lesson

STEP III:- find out the types of foreign trade, types of foreign trade and how they all work

STEP IV:- each person is going to look out for the boundaries of international trade particularly state

STEP V:- each person will be asked to write out what they have found out on foreign trade.

EVALUATION:- lesson will be evaluated by the teacher by asking students questions based on what they have found out during the process of their reading

x. What is another name for foreign trade?

xi. Explain how import takes place?

xii. How balance of trade does take place?

CONCLUSION:- Teacher conclude the lesson thus as:

- You remember you found out what foreign trade is…….
- You remember what types of foreign trade are ……
- You also remember what balance trade deficit is……..……
- You also remember what the problems of foreign trade are ……

Lesson ended by given them home work

ASSIGNMENT:-

- What are aids to trade?
- List out the invisible items in Nigeria balance of payment.
- What are the role of customs and excise in foreign trade?

sSELF EVALUATION

Remark:- Is the topic achievable?

Answer:- Yes is achievable.

APPENDIX B6

PROBLEM-SOLVING STRATEGY LESSON PLAN

FOR THE THIRD LESSON

DATE: 14th **JULY, 2014**

SCHOOL: Govt. Junior Secondary School Jama'a/Chikaji

SUBJECT: Business Studies

TOPIC: Trade

SUB-TOPIC: Aids to Trade

CLASS: Jss two (2)

TIME: 10:00-10:35am

DURATION: 35 minutes

General Objective:- By the end of the topic, students should be able to list out aids to trade .

Specific Objectives:- i. Students should be able to state the meaning of customs and excise in foreign trade.

ii. List out the role customs and excise in foreign trade

iii .state balance of payment.

iv. Give examples of invisible items in Nigeria's trade goods and services that are exported from the country and those that are imported.

Preparation/Teaching Aids

MATERIALS:- e.g. charts of items that cloud be seen in the market, pictures of people

INTRODUCTIONS – The lesson will be introduced by teacher by asking students question thus as:

i how many of you have been to the post office?

ii what do people do in the bank?

iii what are the duties of the customs officers?

PRESENTATION:- The lesson will be presented using the following steps:

STEP I:- Teacher present her topic by explaining the term aids to trade to the students:

Aids to trade: aids to trade are many but we are going to consider balance of payment, invisible items such as shipping services, financial services and so on .Banking, insurance, advertising and communication aids trade.

STEP II:- Teacher will ask students to explain what they have been asked to read during their second lesson

STEP III:- find out ways in which the banks, insurance and communication can aid trade

STEP IV:- each person is going to list out the role of customs and excise in foreign trade.

STEP V:- each person will be asked to write down what he/she has learn so far on the topic.

EVALUATION:- lesson will be evaluated by the teacher by asking students questions based on what they have found out during the process of their reading

i. There are many aids to trade list three of them.

ii. List out the examples of invisible trade.

iii. The role of customs and excise in foreign trade are?

CONCLUSION:- Teacher conclude the lesson thus as:

- You remember you found out what aids to trade are…….
- You remember you have found out roles of banking and others……
- You also remember you have found out role of customs and excise in foreign trade as……..

ASSIGNMENT:-

Go over all your notes in preparation for achievement test in the next class

SELF EVALUATION

Remark:- Is the topic achievable?

Answer:- Yes is ach ievable.

APPENDIX B7

Teacher evaluate the lessons as follow:

Trade is defined as the exchange of goods and services. Sometimes goods and services may be exchange for credit instead.

Trade by barter: when people exchange goods for goods that was before money was introduced into the system.

Types of trade: there are two types of trade; home trade (domestic or internal) and foreign trade (external or international).

Home trade is of two main types, namely, wholesale and retail.

Foreign trade: it is trade which takes place between two countries.eg. Trade between Nigeria and United States. Foreign trade is divided into two: import and export.

Balance of trade: is the relationship between a country receives for its import.

Balance of trade surplus: is when what is received in for of export is greater than what is paid for import.

Balance of trade deficit: this is when payment for import exceeds what a country receives from export.

Aids to trade:

Balance of payments and foreign trade. Is a very important aspect of foreign trade. It is a statement which shows a country's receipts and payments(income and expenditure) on international transactions on goods and services.

Visible and Invisible items ; visible items are goods that can be seen while invisible item have no physical form in which can be seen. Examples of invisible items are: shipping services, financial services, investment etc.

Role of customs and excise in foreign trade:

- The customs is responsible for collecting the customs and excise duties and other charges on international trade.

APPENDIX C

Business Studies Achievement Test

OBJECTIVE QUESTIONS

Instructions: Attempt all questions in Section A, each question carries 3 marks

1. the relationship between import and export is known as:

A. trade surplus

B. balance of payments

C. balance of trade

2 the following are examples of invisible items in Nigeria's balance of payments except:

A. shipping services

B. financial services

C. cocoa export.

3 Before money was invented people exchange goods for goods .this process is known as:

A. trade by barter

B. buying on credit

C. services

4 ----------are things we buy from other countries.

A. export

B. import

C. goods and money.

5 Trading involves the following functions

A. fishing and hunting

B. buying and selling

C. hairdressing and barbing

6 The creation of utilities is termed

A. industry

B. unitization

C. commerce

7 the following are the sources of funds to public limited company (plc) except

A. equity shares

B. a personal saving

C. reserves

8 one of the following are types of home trade.

A. Wholesale and retail

B home and external

C import and export

9 Which of the following are the two main types of trade?

A. wholesale and counter trade

B. home trade and foreign

C. domestic and home

10 The following are types of home trade except

A. wholesale

B. import

C. retail

11. Another name for foreign trade is known as?

A international trade

A. Domestic trade

B. Trading account

12 foreign trade consists of

A. Buying and giving.

B. Buying and selling.

C. Export and import

13 Trade is best described as

A. A place for buying selling

B. Buying of goods and services for cash or on credit.

C. Buying and selling of only goods

14 The following are auxiliaries to trade EXCEPT

A. Advertising.

B. Banking

C. stock

15The provision made for the protection of properties against risk is

A. Banking.

B. Business.

C. Insurance.

16all of the following are example of home trade except trade between

A. Port Harcourt and London

B. Kaduna and Lagos

C. Abuja and Sokoto

17 Trade which takes place between the wholesaler and the consumer is called----------trade.

A. wholesale

B. retail

C. export

18Business study is a_____ subject taught in junior secondary schools.

A. Vocation

B. Degree

C. Pre-vocational

19 When buying and selling involves other countries, it is referred to as _trade.

A. consumer.

B. home

C. foreign.

20 the following groups are involved in trade except

A. retailer

B. Consumers.

C. wholesellers

SECTION B: EASY QUESTION

Instructions: Answer any two questions from this section.

1. i. Define the term trade.

ii list out the major types of trade you.

2. What do we mean by;

i imports

ii exports

3 explain what is meant by

i. balance of trade.

ii balance of trade deficit

APPENDIX D

Business studies Achievement Test

MARKING SCHEME

Objective Question: This contains 20 questions and each question carries 3 marks making a total 60 marks.

Easy Question: This contains three questions to answer two and each question carries 20 marks making a total of 40 marks.

Answers to the objective question.

1. A
2. C
3. A
4 B
5. B
6. A
7. B
8. A

9. C

10. B

11. A

12. C

13. B

14. C

15. C

16. A

17. B

18. C

19. C

20. B

Answers for easy questions:

1. Trade is define as buying and selling of goods and services to satisfy the want of consumers. (or in exchange of money or credit) Those who engage in trades are called traders.

   Ii we have two major types of trading .

a. Home trade: is buying and selling within the same country it is also called domestic trade and internal trade.

b. Foreign trade: is buying and selling of goods and services between two or more countries of the world it is known as international trade

2 what do we mean by the following;

i import---imports are things we buy from other countries. example of import goods are motor vehicles, machines, electronic and services etc.

ii export---- these are things we sell to other countries examples crude oil, cocoa, groundnuts and rubber etc.

3 explain the following;

i balance of trade---is the relationship between what a country receives for its export and what it pays for its import.

ii balance of trade deficit- --when payment for import exceeds what a country receives from export.

APPENDIX E

STUDENTS' PRE-TEST POST-TEST SCORES

	GSS JAMA'A		GSS CHIKAJI	
S/N	Pretest	Postest	Pretest	Posttest
1	50	80	30	80
2	46	78	42	76
3	40	90	30	78
4	44	86	32	66
5	38	70	30	71
6	58	90	34	82
7	40	80	30	70
8	40	90	40	80
9	40	86	30	70
10	38	70	42	73
11	54	86	34	86
12	40	80	32	80
13	42	90	30	70
14	32	88	42	76
15	40	80	42	68
16	40	70	34	76

17	38	70	31	60
18	30	65	46	70
19	40	62	30	73
20	30	70	30	72
21	42	68	38	73
22	50	80	36	80
23	51	80	32	80
24	48	68	40	70
25	40	70	48	86
26	51	60	30	66
27	50	64	34	70
28	30	70	40	82
29	40	60	30	60
30	46	65	32	80

APPENDIX F

MALE/FEMALE PRE-TEST AND POST-TEST SCORES

	Cooperative learning Strategy		**Problem-solving strategy**	
S/No	**Male pre-test,post-test scores**	**Female pre-test ,post testscores**	**Male pre-test,post-test scores**	**Females pre-test ,post testscores**
1	50	40	46	34
2	46	38	42	31
3	40	30	30	46
4	44	40	48	30
5	38	30	30	30
6	58	42	34	38
7	40	50	30	48
8	40	51	46	32
9	40	48	30	40
10	38	40	42	48
11	54	51	34	30
12	40	50	32	50
13	42	30	30	40
14	32	40	42	30

15	40	46	42	32
16	80	70	80	76
17	78	70	76	60
18	90	65	78	77
19	86	62	66	73
20	70	70	71	72
21	90	68	90	73
22	80	80	64	80
23	90	80	88	88
24	86	68	70	70
25	70	70	73	86
26	86	60	86	66
27	80	64	90	80
28	90	70	80	82
29	88	60	76	60
30	80	65	68	80

APPENDIX G

Kaduna state schools census report
2011/2012

Table 3.9 Enrolment in public junior secondary school by level, gender and LGEA

LGEA	JS1			JS2			JS3		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
BIRNIN GWARI	833	66	899	679	326	1,005	767	293	1,060
CHIKUN	705	861	1,566	1,069	1,149	2,218	1,304	1,284	2,588
GIWA	644	261	905	672	283	955	707	255	962
IGABI	1,409	867	2,276	1,361	906	2,267	1,338	783	2,121
IKARA	774	408	1,182	760	345	1,105	651	373	1,024
JABA	414	460	874	452	466	918	468	466	934
JEMA'A	704	670	1,374	678	618	1,296	693	616	1,309
KACHIA	461	790	1,251	470	876	1,346	502	797	1,299
KADUNA NORTH	1,039	1,945	2,984	1,223	2,584	3,807	1,161	2,406	3,567
KADUNA SOUTH	1,538	1,066	2,604	1,887	1,342	3,229	1,904	1,332	3,236
KAGARKO	1,337	995	2,332	1,345	966	2,311	1,512	1,252	2,764
KAJURU	604	500	1,104	574	440	1,014	618	452	1,070
KAURA	374	393	767	416	380	796	440	421	861
KAURU	906	587	1,493	1,171	594	1,765	1,099	670	1,769
KUBAU	568	272	840	716	400	1,116	790	449	1,239
KUDAN	408	165	573	511	208	719	438	160	598
LERE	1,561	1,091	2,652	1,662	1,044	2,706	1,452	1,024	2,476
MAKARFI	594	170	764	711	185	896	680	187	867
SABON GARI	1,596	2,177	3,773	1,889	1,518	3,407	1,196	1,886	3,082
SANGA	262	249	511	243	228	471	269	235	504
SOBA	431	146	577	442	112	554	535	119	654
ZANGON KATAF	613	535	1,148	669	637	1,306	604	454	1,058
ZARIA	1,890	1,276	3,166	2,555	1,465	4,020	2,097	1,585	3,682
TOTAL	19,665	15,950	35,615	22,155	17,072	39,227	21,225	17,499	38,724

August 2012