EFFECTS OF DEMONSTRATION AND PROBLEM-SOLVING METHODS ON PERFORMANCE OF SECONDARY SCHOOL STUDENTS IN ECONOMICS IN KADUNA STATE, NIGERIA

BY

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M.ED/EDUC/2769/2011-2012
P16EDVE8012

A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA

IN PARTIAL FULFILLMENT FOR THE AWARD OF MASTER DEGREE IN BUSINESS EDUCATION

DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
FACULTY OF EDUCATION
AHMADU BELLO UNIVERSITY,
ZARIA, NIGERIA

MARCH, 2017

DECLARATION

I, declare that the work in this dissertation entitled Effects of Demonstration and Problem-Solving Methods on Performance of Secondary School Students in Economics in Kaduna State, Nigeria has been performed by me in the Department of Vocational and Technical Education. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree or diploma at this or any other institution.

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CERTIFICATION

This dissertation entitled Effects of Demonstration and Problem-Solving Methods on Performance of Secondary School Students in Economics in Kaduna State, Nigeria by KAGAI Kaboshio meets the regulations governing the award of the degree of Master's of Education Business Education of Ahmadu Bello University and is approved for its contributions to knowledge and literary presentation.

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DEDICATION

This dissertation is dedicated to my late Parents and beloved families.

ACKNOWLEDGEMENT

Researcher's profound thanks goes to my capable and diligent supervisors, Prof. A. A Udoh and Dr. T. J. Adeshina for their immeasurable suggestions, recommendations contributions and encouragement to make this work a reality. Researcher will also like to extend my thanks to the post-graduate coordinator in the person of Dr. S. Ibrahim for his great assistance in the course of this study. Similarly my thanks also goes to my internal examiners Prof. T. O. Ojo and Dr. J. O. Bawa for their immense suggestions and encouragement to ensure this work becomes a successful one.

Researcher can never forget to mention other academic staff in their various contributions and purposeful direction in this study that finally brought this work to the successful completion. Dr. I., M. Haruna, Prof. A. Z. Mohammed, Dr. D. O. Oni, Prof. P. E. Onuigbo, Prof. E. Ike, Prof. E. E. Adamu, Prof. S. L. Ajayi and the entire staff of the Department of Vocational and Technical Education for their great encouragement, purposeful direction in this study. Researcher also want to use this opportunity to sincerely thank all his 2011/2012 postgraduate course mates.

The researcher would not forget to extend a special regard and thanks to his late parents who during their life time took care of my educational career. Also my special gratitude goes to my beloved family members in the person of Talatu and children who were always supporting me and have been on their knees to God for the completion of this study.

Finally, his profound gratitude goes to my prayer group members and all other well wishers.

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LIST OF ABBREVIATIONS

ANCOVA	-	Analysis of Covariance
ANOVA	-	Analysis of variance
BTW.	-	Between
DEMOS	-	Demonstration
Df.	-	Differences
EAT	-	Economics Achievement Test
EXP	-	Experiment
LGA	-	Local Government Area
METH.	-	Method
N	-	Number of students
NECO	-	National Examination Council
PROB.	-	Problem
RM	-	Renarks
SSS	-	Senior Secondary School
SD	-	Standard Deviation
SE	-	Standard Error
SOVL.	-	Solving
RET.	-	Retained
REJ.	-	Rejected
RMK	-	Remarked
SIG	-	Significance
T.CAL	-	T. Calculated
T. CRI.	-	T. Critical
VAR.	-	Variable
WAEC	-	West Africa Examination Council

OPERATIONAL DEFINITION OF TERMS

Demonstration method: is a teaching method that is designed to illustrate a concept, principles or procedure, it is also designed to present a problem for the students to explore.

Lecturer Method: Is a teaching method where a teacher systematically unfolds a body of information or knowledge to his students who listening and take notes simultaneously.

Problem Solving method: Is a teaching method by which a learner discovers a previously learn rules or ideas that can be applied to novel situation.

ABSTRACT

The study was carried out to determined the Effects of Demonstration and problem-solving methods on performance of secondary school students in Economics in Kaduna State, Nigeria. As a guide to the study, five research objectives were formulated, five null hypotheses were raised and were tested at 0.05 level of significance. The population of the study was 121 the research design of this study was quasi-experimental designed. There were two experimental groups and one control group. The instrument used for the data collection was the Economics Achievement Test (EAT). Data collected for the study were statistically analysed using descriptive statistics, t-test and ANOVA. The objectives of the study amongst others seek to determine the effect on the mean academic performance of students taught economics using demonstration and those taught using lecture method. One of the research questions amongst others in what's the effect on the mean academic performance of students taught economics using demonstration and those taught using lecture method? The research null hypothesis among others states that there is no significant effect on the mean academic performance of students taught economics using demonstration and those taught using lecture method. The findings showed among others that there was a significant mean different of 18.47 between the mean performance of students taught economics using demonstration method and those taught using lecture method. This indicated that demonstration method students performed better than the lecture method group. The study also revealed that there was a significant mean difference of 20.39 between the performance of students using problem solving and the lecture method group. On the basis of these findings some recommendations were made include teachers of economics should use more of demonstration and problem solving methods as it enhances the performance among SS II students. Problem – solving and demonstration methods of teaching should be used for both sexes, since there is no significant effect in their performances.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Economics is one of the important social science subject taught at the senior secondary school (SSS) level. It is one of the core social science subject that students are required to pass at credit level in order to qualify for admission into tertiary institution to pursue social science programmes. In addition credit pass in economics is require for admission into most social science courses at the tertiary level of education. Example of such courses are Business Education, Accounting, Business Administration and Economics among others. Inspite of this central and important position of economic among other social science and related disciplines, studies revealed that academic performance of students in economics at West African Examination Council (WAEC) has been very poor and unimpressive (Adebisi 2008 and Njoku 2010). Many factors had been suggested as contributing to this poor performance of students in economics, some of these factors include: poor teaching methods, lack of adequate teaching materials, lack of trained teachers, and lack of understanding of the bases of teaching and learning social science subjects (Adeyegbe, 2010). These poor performance of students in the West African Examination Council (WAEC) can be seen in appendix II.

From the foregoing, there seem to be no doubt that economics students have problem/difficulties in the learning of economics which has resulted in poor performance at senior secondary school level. Therefore, there is the need to find out ways of solving this problem.

A number of activity – oriented instructional strategies have been advocated for by curriculum designers and social science educators to help improve on the failure rate among secondary school social science students. Examples of these include guided discovery approach and problem – solving for teaching senior secondary school economics (FRN, 2004).

Research findings have however, revealed that to date, large proportion of social science teachers , economics inclusive still resort to the use of lecture method rather than the activity –oriented strategies advocated for, such as demonstration method problem-solving and others (Bichi 2002). Several other researchers, notably Awodi (2004) and Oyedokun (2005) reported the indiscriminate used of lecture method by social science teachers economics inclusive. The indiscriminate use of the method is attributed to the academic level of the teacher, non – availability of instructional materials and the pressure to cover a prescribed examination syllabus in a relatively short period of time (Okebukola, 2005). He further stated that when social science is taught using the lecture method, students often resort to rote learning and in the process missies and essential part of social science learning, and this lead to poor academic performance in the social science. This study will look at whether gender has an effect in the method used in teaching economics. The term ‘gender’ is used to described the biological sexual characteristic by which we identified male and females (Jimoh, 2005) the term lays more emphases on social character of manhood and womanhood which lays more emphasis on who does what and how decisions are made. The belief that males are superior to females has affected women /girls in quite a number of ways in both socio - culturally and educational aspect. The belief that women are incapable of doing many things often regarded as rigorous and may be seen as men's vocation. The orientation that boys dominate schools and classrooms had a very negative effect on girls chance of performance and success at school (Lyada, 2006). It is based on this that the study looked at the relative effect of gender on the method of teaching economics.

In conclusion, it has therefore become apparent that the lecture method which is currently the predominate teaching approach in Kaduna State secondary schools is inappropriate and ineffective for achieving the objectives of economic programme. Therefore, there is a need to search for more effective methods that are suitable and efficient for promoting the level of secondary school economics performance beyond contemporary limits and to the satisfaction of the current economics curriculum requirement. It is against this background that this study was taken to find out the effects of demonstration and problem –solving methods in performance of secondary school students in economics in Kaduna State.

1.2 Statement of the Problem

The performance of students in economics which has been on a declining state in the recent years, this is evident by the changes in the recent West African Examination Council (WAEC) result of 2010 – 2013, for instance, the results available from Kaduna state ministry of education showed 23.28% passed in 2010, 23.12% in 2011, 18.11% passed in 2012 and 13.47% in 2013, the details is in appendix II.

Prominent among the factors which have been identified as contributing to the persistent low interest and low level of performance in economics are poor teaching method adopted by Economics teachers (Ogundare 2005), (Adeyemi 2006) the predominant used of text and lecture method in teaching economics, learner variables such as home background, lack of organized strategies for concept formation, gender, teacher characteristics and memory skills, (Falade, 2006). 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 economics programme.

In view of the apparent students poor performance in economics among secondary school leavers as indicated by the various West Africa Examination Council WAEC) result, the researcher is wondering whether the method of teaching the subject may not affect secondary school students performance in the subject. This study further considers whether a comparison of demonstration and lecture methods might not show which of them is more effective for teaching. Therefore, it is based on these inconsistencies that formed the problem which promoted this study to find out the effects of demonstration and problem – solving methods in economics in Kaduna State.

1.3 Objectives of the Study

The general objective of this study is to determine the effects of demonstration and problem–solving methods on performance of secondary school students in economics. The specific objectives include to:-

1. determine the effect on the mean academic performance of students taught economics using demonstration and those taught using lecture method.
2. determine the effect on the mean academics performance of students taught economics using problem–solving method and those taught using lecture method.

3. determine the effect on the mean academic performance of male and female students taught economics using demonstration method.

4. determine the effect on the mean academic performance of male and female students taught economics using problem – solving method.

5. determine the effect on the mean academic performance of students taught economics using demonstration, problem-solving and lecture methods.

1.4 Research Questions

The following research questions were set for the study.

1. What is the effect on the mean academic performance of students taught economics using demonstration and those taught using lecture method?

2. What is the effect on the mean academic performance of students taught economics using problem-solving and those taught using lecture method?

3. What is the effect on the mean academic performance of male and female students taught economics using demonstration method?

4. What is the effect on the mean academic performance of male and female students taught economics using problems-solving method?

5. What is the effect on the mean academic performance of students taught economic using demonstration, problem-solving and lecture method?

1.5 Research Null Hypotheses

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

Ho1. There is no significant effect on the mean academic performance of students taught economics using demonstration and those taught using lecture method.

Ho2. There is no significant effect on the means academic performance of students taught economics using problem–solving and those taught using lecture method.

Ho3. There is no significant effect on the mean academic performance of male and female students taught economics using demonstration method.

Ho4. There is no significant effect on the mean academic performance of male and female students taught economics using problem – solving method.

Ho5. There is no significant effect on the mean academic performance of students taught economics using demonstration, problem-solving and lecture methods.

1.6 Significance of the Study

The findings of this study will be beneficial to the following: publishers, curriculum planners, teachers, students, researchers, states and federal government. The findings of this study is hope to be beneficial to publishers of textbooks so as to emphasize problem-solving and demonstration methods of teaching economics in their publications.

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

The teachers of economics will stand a better chance to reap from the result of this study as the study will suggest strategies that will assist teachers in the selection of appropriate teaching strategies that will enhance students performance.

The finding will also be useful to students due to it's illustrative and display nature as well as learning how to learn strategy if emphasized, this is likely to improve their performance.

It will also benefit fellow researchers because it would form a foundation for further studies in the use of demonstration and problem – solving methods as it affects students' performance and add to recent literature.

In addition, the state and federal government will benefit from the findings of this study, because the study will serve as an eye opener for them to see the need to embrace economics education and provide adequate funds, man power, and facilities to facilitate the teaching and learning of economics. Finally the study will serve as a point of reference for further research in other subjects and in other parts of the country.

1.7 Assumption of the Study

The following basic assumptions are made for the study that:

1. Students who are taught using demonstration method perform better than those students who are taught using lecture method.

2. Students who are taught using problem – solving perform better than students taught using lecture method.

3. Male students taught perform better than female taught using demonstration method.

4. Male students taught perform better than female taught using problem – solving method.

1.8 Delimitation of the Study

The study was delimited to public senior secondary schools that offer economics in Kaduna State. Only senior secondary school that have presented candidates for the West African Examination Council (WAEC) were used because they met the requirement stated above. Only the SS II students both male and female were used for the study, because they have experience in the learning of economics as a subject for two years and were not too busy, unlike the SS III students who were preparing for their West African Examination Council (WAEC). The study is having a population of 1,109 students from the 23 local governments in the state. In view of the research method employed, the study is delimited to one co-education secondary school in Zaria inspectorate division that is Government Commercial College Zaria. The details is in appendix xi.

The study is also delimited to the use of three teaching methods namely, demonstration, problem – solving and lecture methods in teaching economics. These methods are used because they are the methods the researcher has chosen for the study. The researcher taught the concept 'trade', this is because the topic is in the SS II syllabus and is something that occurs in the environment of the students.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

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

2.1 Theoretical Framework

2.2 Conceptual Framework

2.3 Demonstration Method and Performance of students in economics

2.4 Problem – solving method and performance of students in economics

2.5 Lecture method and performance of students in economics

2.6 Other Teaching Methods

2.7 Learning Styles

2.8 Empirical Studies

2.9 Summary of Review of Literature

2.1 Theoretical Framework

The theoretical framework for this study is based on the theory of constructivism. Brunner (1998) and Piaget (1999) postulate that constructivism is basically a theory based on observation and scientific study about how peel learn. They says that people construct their own understanding and knowledge of the world, through experiencing things and reflecting on those experiences. When we encounter something new, we have to reconcile it with our previous ideas and experience, may be changing what we believe or may be discarding the new information as irrelevant. In any case, we are active creators of our own knowledge. To do this, we must ask questions, explore, and asses what we know.

In the classroom, the constructivist view of learning can point towards a number of different teaching practices. In the most general sense, it usually means encouraging students to use active techniques (problem—solving, demonstration and so on) to create more knowledge and then to reflect on and talk about what they are doing and how their understanding in formulation of concept is changing. The constructivist teacher provides tools such as problem–solving and demonstration learning activity with which students formulate and test their ideas, draw conclusions and inferences and convey their knowledge in a collaborative learning environment. Constructivism transforms the student from passive recipient of information to an active participant in the learning process. Always guided by the teacher, students construct their knowledge activity rather than just mechanically ingesting knowledge from the teacher or the textbook. Therefore, for effective teaching / learning of economics concept such as trade in the senior secondary schools the use of the demonstration and problem–solving methods, which is constructivist in approach is being used for this study.

Robert (1996) theory of learning hierarchy, is the theory of learning hierarchy which believed that materials meant for learning must be sequentially structured so that the learning of one topic (i.e acquisition of one knowledge aid the learning of the next higher topic (acquisition of next higher knowledge). In other words, the theory emphasized that, the learning of new concept or skills depends upon the mastery of prerequisite concept. This invariably implies that learning must be sequentially structured by the teacher from simple to complex until the desired objectives are achieved.

An activity-oriented (constructivist) instructional teaching methods like demonstration and problem–solving was used in conjunction with the Robert hierarchy of learning to bring about improvement in economic students performance. However Robert hierarchy of learning also contends what, learning tasks for intellectual skill can be organized in a hierarchy according to complexity (i.e from simple to complex). Therefore, in this study, effects of demonstration and problem–solving methods on performance of secondary school in economics will be investigated. However, the use of activity-oriented instructional teaching methods like demonstration and problem–solving instructional method (which is constructivist) was advocated foe by some social science educators to help shift form teacher – centered to students –centered teaching / learning in the classroom (Adelekun 2000 and Bichi 2002).

2.2 Conceptual Framework

One of the major reasons why most students failed to understand economic in our contemporary society especially in Kaduna State is the economics concepts that are not understood by the students. According to Ugoji (2009) no economics students can have a better learning of economics without first understanding the basic concepts of the subject economics. He emphasized on the six basic concepts of economics which are:

a. Wants: Wants simply means the desire or wish to own goods or services that gives satisfaction. Human beings want or need many things at a particular time. The basic needs or want of man are food, shelter and clothing. As these basic needs are satisfied, other needs will arise. This is why we say that human wants are insatiable. This is because, human wants are unlimited while resources used in satisfying them are limited.

b. Scarcity: refers to the limited available resources used in satisfying the unlimited human wants. These resources are scarce relative to their demand. It is as a result of scarcity of resources that made the study of economics very essential in order to find alternative uses of these scarce resource. The available resources cannot satisfy all human wants. Since human wants are unlimited or insatiable relative to the available resources, we have to choose the most pressing ones and leave others that are less important because resources are scare. Economically, resources such as money, material, time, production resource e.t.c are relatively scare to the peoples demand. The producers, consumer as well as government face the problem of scarcity and this lead to the study of what to produce? How to produce? For whom to produce and how to distributed

c. Scale of preference: refers to a list of individual wants in order of their relative importance, the drawing of scale of preference will make it easier for choice to be made. Since human wants are unlimited and the available resources used in satisfying these wants are limited and cannot satisfy all human wants, Human being have no choice than to rank these needs in order of their relative importance, called scale of preference, placing more important or pressing needs first before the less important ones that may be satisfied at a later day. This hierarchicalization of needs which is inevitable as a result of limited resource help one to make rational choices.

d. Choice: Means the act of selecting some needs for satisfaction out of many others based on the resources available to the person making the decision. Man is faced with the problem of choice because as soon as some needs are satisfied other needs will arise. Since it is impossible for any human being to satisfy all his wants at a particular time, human beings must choose the most pressing wants for satisfaction based on the resources within his reach. For instance, every human being will like to eat good food, own a nice car, a house with all the necessary household appliances like television , video sets, radio sets, refrigerator, air condition, servants and so on, but not everybody can afford all these luxuries at a time. As a result the person will have to choose the most pressing needs among the above itemized needs.

e. Opportunity cost: Means the alternative foregone or sacrifice made in order to satisfy another want, it refers to the need that is left unsatisfied in order to satisfy another most pressing need. For instance, a students may need exercise books, biro, textbook, sandals, shirts, trousers and shoes, in the student scale of preference above, the cost of the exercise book, biro, textbook and sandals bought are the shirts, trousers and shoes he had left unbought. The shirt, trouser and shoes that were left unsatisfied or unbought are known as alternative forgone or sacrificed alternatives. This alternative foregone or sacrificed is known as in economics as opportunity cost or real or true cost . The teaching methods that are a focus in this study are discussed below.

The Methods of Teaching Economics

Teaching is an inculcation of knowledge for a positive change in the learners. Teachings are planned series of action for achieving something (Longman, 2008). Therefore, teaching methods are planned series of actions for transmitting knowledge to the leaver., This includes the methodology and the management techniques adopted by the teacher during the process of teaching. The ultimate aim of the teacher is to organize conditions necessary for effective learning to take place. There are various methods and techniques a teacher can adopt in presenting the lesson to the students depending on the subject matter being taught. The teaching methods discussed below are the focus for this study.

2.3 Demonstration method and performance of students in Economics

This is a teaching method usually used by the teacher to illustrate, show clearly or give example's to explain a concept for a procedure to be followed (Leroy, 2005) people can also communicate values and ideas through demonstration, this is often done in play, movies and pictures, picture without words can shows or demonstrate various types of actions and consequences (MC Kee 2008). According to Ndanwu U. (2008) agreed that for economics, commerce, accounting to be taught properly, the teaches demonstration by all means in very important. This however shows the student the various manipulations and use of the figures, concept, symbols and even signs which include what is to be done and why it is done. Demonstration method according to Aliyu (2008) entails a display, illustration or exhibition or to show clearly a concept facts, diagram, table procedure or an activity which is usually carried out by the teacher while the students watch. It is used in showing the students the meaning of certain diagrams, facts, tables, and concepts of economics, demonstration can be carried out by a single teacher alone, or by a students or group of students. Atadoga (2009) viewed demonstration method as student centered focusing on the fact that what students see and participate is more permanent than what they read or hear. Demonstration method has imparted positively on the academic performance of students in economics due to the following advantages.

a. Motivation of students interest at the beginning of the lesson as the teacher display or illustrate.

b. Developed self-confidence through frequent exchange of ideas between the teacher and the students, thereby improving academic achievement.

c. As students take part in the demonstration process, that broadens their knowledge and understanding of the instructional content.

d. It faster the development of interpersonal relationship in the class, because the students participate with the teacher and with one another.

e. Demonstration is an inexpensive method of teacher economic, since sometimes only the demonstrator needs materials.

f. A good demonstration facilities learning by making the learners to be alert and attentive as the lesson progresses.

g. The proficiency displayed by the demonstrator reduces the error or time in carrying out the lesson.

l. Demonstration can be used to introduce a new lesson to the students. In order words, it can be regarded as attention inducer because the students will be eager to see and know what the demonstrator is trying to do.

Some of the disadvantages of the demonstration methods include the following:-

a. With demonstration method less scope is covered.

b. In a situation where the class size is large, some students may not see properly what the demonstrator or teacher is doing.

c. Students sitting arrangement should be such that smaller ones in front and tall ones behind. This arrangement will enable all the students to observe the demonstration clearly.

d. In a situation where students are not completely involved in carrying out the demonstration, those involve in the learning process may be restricted to a few of them.

e. In case where the demonstration is restricted to the teacher alone, students find it extremely difficult to acquire manipulative skills.

f. With demonstration, ability of the students to observe correctly is an important parameter in achieving success in the learning process.

The overall benefits of this method is that, it leads students to achieve high academically, because the teacher helps in encouraging other students who would normally not contribute by taking part in the demonstration process. Atadoga (2009) stated that the nature of demonstration method is such that it gives the students opportunity to see and participate in what is being illustrated and interact among themselves and with the teacher, thus making learning more effective. Despite the huge advantage of this method as revealed by research, the classroom practice is often not put into practice by many teachers. This could be one of the factors for the poor achievement in economics. It is against this background that the researcher utilized demonstration and lecture methods to compare their effects on the academic performance amongst the SS II economics students.

2.4 Problem – Solving Method and Performance of Students in Economics

Jerome and Olalekan (2000) defined Problem – Solving as a skill that requires finding a solution that is unique and novel to identified problems. It is also the ability to adopt relevant techniques to handled the task at hand and to generate possible strategies to solve problems that are familiar. Problem – solving strategy comprises action steps taken by the leaner to reach anticipated goal or solution when face with a problem situation. Problem – solving means engaging in a task for which the solution is not known in advance. Yewande (2006) was of the opinion that problem – solving is using information and reasoning to overcome obstacle barrier.

Teaching students to solving problem is based on the hypothesis that knowledge is organized and stored in memory in a sequential and logical networks (Anderson, 2006) and hence it can be retrieved in a stepwise and sequential manner to solve problems. This then means that problem – solving is a process of finding answers or approaching solutions creativity. This then means that problem – solving is a process of findings answers or approaching solutions creatively. This process requires the learners to be totally involved in the learning process. Okoli (2007) defined problem – solving as the process of applying previously acquired knowledge to obtain a satisfactory solution to new and unfamiliar problem, Selvaratnan (2007) defined problem – solving as a mental process and is part of the larger problem that includes problem finding and problem shaping, problem – solving has been defined as higher – order cognitive process that requires modulation. The 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 (2008) 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 (2008) expressed that the problem – solving method of teaching is an active learning process where learners learn according to their own need and pace. Also Ajoma (2009) 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 economics to learn new concepts and ideas through problem solving, leading to discovery, apply previous knowledge to solve problems in economics and identify problems area of students based on what they have learnt. Therefore, the importance of problem–solving method 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 listener to problem solvers. It also shifts the emphasis of educational programs from teaching to learning. According to Gallagher and Workman (2001) in problem – solving learning environment, students act as professional when confronted with problems that require clearly defining and well structured problems, utilizing data from different source revising 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 help students problem – solving skills and promote students independent learning skill. similarly, Tick (2003) 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 risk to adopt new understandings to apply knowledge to work in context and to enjoy the thrill of being discovers.

Tick (2003) also stated that in the student centered learning environment that is desirable for problem based learning, the control 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 (2004) reported that research support the idea that lecture and memorization do not lead to long term knowledge or the ability to apply that knowledge to new situation, hence, the importance of the problem solving method of teaching. Another importance of problem – solving is noted by Snyder and Snyder (2007) that problems 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 leaning from peers and the integration and synthesis of a variety of knowledge, the 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 dispense of knowledge. Roh (2003) argued that within problem based learning environment, teachers instructional abilities are more critical than in the traditional teacher – centered classrooms. Beyond presenting the subject knowledge to the students teacher in problem based learning environments most engaged student in marshalling information and using their knowledge in applied real life settings.

Snyder and Snyder (2007) 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 and Fisher (2009) observed that although economics students perceive critical thinking as an important skill, they typically do not known 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 experience must first model the behaviour of the students (Hemming 2009). 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, 2007). Below are barriers to use of problem – solving method.

2.4.3 Barriers to the use of problem – solving method

Several issues have been raised by researchers as barriers or obstacles to the use of problem – solving methods in our schools. Wong (2007) observed that the current educational trend focus mostly on test in the classroom. The emphasis is on "teaching to the test" distracts the learning process form students – 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 (2007) identified three barriers which often impede the use of problem – solving method (i) lack of training, (ii) lack of information and (iii) time constraints. First, teachers often are not trained in p problem – solving methodology (Broadbear, 2003) lecture method is being discussed in 2.5.

2.5 Lecture Teaching Method

According to Salawu (2009), the method of teaching could be regarded as the vehicle through which a message is delivered. The conventional method of teaching therefore, could also be regarded as the existing traditional methods of instruction in a normal classroom setting. There exist several methods of such conventional methods of instruction which have been in used in the educational system over the years. among such conventional methods of instructions are lecture method inquiring method, dramatization method, project and field trip among others. Among the conventional methods of instructions no one method could be said to be most appropriate. Rather classroom experience shows that in most class two or more teaching methods are combined by teachers in classroom practice.

Lecture method allows a great deal of information to be passed to the learner and favours handling of larger classes. Inspite of this advantage the lecture method does not stimulate students' innovation, inquiring and scientific attitudes. It encourages students to cram facts which are easily forgotten (Okwilagwe, 2009). However, there is still a need to search and incorporate modern instructional strategies which the advanced world has long accepted into their classrooms.

This method of teaching is referred to as teacher – centered method of teaching because the teacher does the talking while students listen. Ajoma (2009) described the lecture method as a process whereby teachers give a talk on a subject to students, while the students listen and think about the lesson taught. To her, though the lecture method has the advantage of being useful in a large class and in advanced level of learning, it should not be encouraged in the secondary schools. Ediger (2009) views lecture method to include explanation because it involved one – way of communication. The message then goes from the instructor to students. To him, even for primary school students, lectures (explanations) are essential to students achieving, developing and growing.

Aliyu (2008) opined that lecture method is a situation were the teacher talks and talks while students listen. The lecture method of teaching irrespective of the different views of authors is till the most widely used form of teaching. Abimbola (2010) was of this view that the lecture method is still the best method for teaching students new concepts and principles. Also in the view of Abimbla (2010) the lecture method has received more criticism than any teaching method, yet it continues to be used extensively. They believe that the lecture method is undoubtedly one or the most efficient means of conveying large quantities of information in a short period of time. The advantage of this method of teaching as enumerated by Abimbola (2010) are:

1. It enables the teacher to handle a very large class.
2. It helps the teacher to cover a large portion of the instructional content within a short time.
3. It helps the teacher to develop his communication skills.
4. It helps the students to develop and improve their listening skills.
5. Less time is needed in preparing lessons.
6. It helps the learners to develop the skills of taking notes.
7. It motivate students to read widely since not all what the teacher says that could be captured by the students.

The following are the disadvantages of lecture method:-

1. It renders the learners passive.

2. There is little or no room for students' interaction.

3. Learners are not provided with enough room to develop their communication skills.

4. Except with good speakers, the attention span of the learners is shortened.

5. Memorization of facts may be mistaken for meaningful learning on the part of the learners.

6. Learning is basically informative.

7. It does not cater for individual differences of the students.

2.6 Other Teaching Methods

There are various methods and techniques a teacher can adopt in presenting the lesson to the students depending on the subject matter being taught. The popular methods and techniques which are adopted in teaching economics according to Mills (2001) are as follows:

1. Cooperative Learning Method

Cooperative Learning is the instructional use of small groups in which students work together and gain from each other (Johnson, 2007). In cooperative learning students are expected to help, discuss and ague with each other assess each others current knowledge and fill any gap in each others' understanding (Slavin, 1998). Cooperative leaning method involves a small team to solve a problem complete a task or accomplish a common goal (Newman and Rock, 2004).

2. Discussion Method

It is a useful way of instruction and of stimulating thought and interest in a topic or subject (Mills, 2004) discussion method can often be more effective than the field trip method by making students think and in contributing their own ideas. It must not only be carefully controlled by the teacher but also required individual preparation by the students (Harrison, 2008), 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 topic, issue, problem or situation (Mkpa, 2008). He further revealed that it has the merit of encouraging leaners to depend on the ability to think than on the teacher.

3. Question Method

Highet (2005) described it as a method where the teacher 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 have not been presented to the child ready made, but drawn out of his own mind with the help of the teacher.

4. Role Playing:

This is a method of teaching where students are made to act out certain rolls in the class like the role of secretaries, receptionist, nurses, doctors, teachers and the parts played by executives in taking decision, concerning management problems and situations(Harrison, 2008). 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.

5. 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, views ideas and reactions. The group technique can be applied to economics classes (Popham, 1999). They method provide an opportunity for all to participate in a way that is not possible in a total classroom 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.

6. Practice and Drill

In this method, students repeatedly performed the desired act until they reach an acceptable degree of competency (Onwuka, 1999). Their achievement at each level provides them with sense of satisfaction which in turn encourage them to practice further the desired learning activities. (Onwuka, 1999). Popham (1999) 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 very effective in the teaching and learning of economics, accounting, shorthand and typewriting.

7. Field Trip method

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 (Popham, 1999). 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 illustration of classroom theory, to reinforce understanding, develop from reading and discussion, to see, smell and touch or hear the objects or process 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 situation.

2.7 Leaning Styles

Individual are different and they do things differently. These differences apply also to the issue of learning, people learn in different ways. Learning styles according to Verser and Vrekan (2008) 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 students – related variables.

There is need for educators to adopt approaches to teaching and assessment that enable students with different learning styles to learn effectively. Sangster (2008) 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 characteristic 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 advocate of leaning style measurement. One of such agenda is matching an individuals learning styles preference to specific learning activities in order to improve learning outcomes, but also to counteract weaknesses in an individuals learning style. This is done to deal with mismatching which may stretch learners educationally.

Other researcher 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, 2009). According to Kowoser and Berman (2009) research showed that providing mismatches in teaching and learning styles can stimulate learning and flexibility in learning. 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 (2010) noted that numerous studies suggested that learning in matched condition may in certain context be significantly more effective than leaning in mismatched conditions. Vangham and Bakor (2010) agreed that marching may lead to learners becoming bored.

Liu and Reed (2004) suggest that understanding the variable 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, while others contend that the effect of matching is significant. Despite the argument for match / mismatch of students learning styles to specific learn activities, it will be necessary for teaches to be conversant with students different learning styles which include among others. The learning style of Kolb and Honey identified by Vesse and Mcchlery (2006) which are activist, reflector, Theorist and pragmatists.

1. Activist: act first and consider the consequences later

2. Reflector: prefer to ponder their experience, observing them from different perspectives.

3. Theorists: try to adapt and integrate experience logically.

4. Pragmatist: enjoy trying new ideas, theories and techniques to see if they will 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 Silver Man (2006) develop Feder's model of learning styles which has four dimensions, processing (Active / Reflective), perception (sensing / intuitive). Input (Visual / verbal,) and understanding (sequential / global).

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

2. Sensing / intuitive dimension sensing learners are concrete and practical 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 relationship themselves, and they are innovative in their approach to problem solving.

3. 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.

4. Sequential / Global learners: sequential learners understand new information in linear logical steps, while global learners learn in large leaps and thinks holistically.

2.8 Review of Related Empirical Studies

The following empirical studies related to this research work are reviewed Okoli (2010) carried out a study on the comparative study of using problem – solving and demonstration method on secondary school students performance in financial accounting in Gombe State. The research raised four purpose for the study which included comparing the performance of students taught with the lecture method, determine the differences in the performance of students taught with problem – solving method and those taught with the lecture method, determine the differences in the performance of students taught with the lecture 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 survey design, and had two treatment groups (problem – solving and demonstration groups) and one control group (lecture method) of 30 students in 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 the demonstration group performing better than the other groups.

The above study is of relevance to this research because the current study seeks to determine if the use of problem – solving and demonstration methods by teachers has any effect on students performance in economics. One of the research questions seeks to determined if the use of demonstration will enhance student's academic performance in economics than the use of conventional method of teaching of which the result form the findings above may apply. The point of difference of the conducted research with this study is that it was carried out using financial accounting, while this present study is to be carried out in economics. The conducted research was conducted in Gombe State, while the current research is in Kaduna State. Also a survey design was used in the above study, while the current study seeks to use a quasi – experimental design.

In another study conducted by Mohammed (2010) on the effect of demonstration method on academic achievement of secondary school students in mathematics in Borno State. The study had four specific objectives which included; to examine the effect of demonstration learning on the academic achievement of low – achievers in mathematics at secondary school level. Research questions were not stated and the researcher used quasi experimental design in the methodology. The population for the study was fourty (40) students. Reliability was determined by using t-test formula analysis of variance was used to test treatment effects for high and low achievers of the experimental and control groups on post – test and retention test. The finding of the study include among other that, experimental group student perform significantly better than the control group – student.

The current research is related to this research because both studies are on demonstration method of teaching, and they both used quasi experimental design in their methodology. The point of department of the conducted research with this study is that the research was conducted in mathematics , while this current research is in economics. The research did not used random sampling technique in selecting the sample. More so, while the above conducted study was carried out in Borno State, the current study will be carried out in Kaduna State.

Adeyemi (2011) carried out a study on the effects of problem – solving and lecture methods on senior secondary school students performance in Biology in Osun State. The objectives of the work include determining the effects of problem – solving and lecture method. The design used for the study was quasi-experimental design. The study made use of 150 students that were selected using stratified sampling technique.

The researcher used analysis of co-variance (ANCOVA) to analyse the data from the pre-test and post-test. The finding of the study include among other that problem – solving learning group had a higher post-test mean score. This means that the problem – solving method group performs better. Although the work was on effects of problem – solving and lecture – method on senior secondary school students' performance in accounting is related to current research, because both researcher make are on the problem – solving method of teaching. Also, both studies are on the same level (senior secondary school) as the current research derived some literature from the work of Adeyemi.

The point of difference of the conducted research with this study is that the research was conducted in biology, while this current research will be in economics. The current research made used of the t – test in the analysis, while the conducted research used the analysis of co-variance (ANCOVA) to analysed the data. The current study is in Kaduna State while, the conducted research was in Osun State.

Shefali (2011) conducted a research on interactive effects of problem – solving learning model and learning goals of students on academic performance of students in mathematics in Kogi State. The study seeks to ascertain whether problem – solving learning model is equally effective for students with mastery and performance goals, the study used quasi-experimental design for conducting the experiment. The experiment was conducted on one hundred and fifty (150) students of senior secondary school. It uses two tools, achievement test in economics and learning goals both develop by the researcher. The techniques used to test the hypotheses are the analysis of covariance (ANCOVA) and the T – test. The findings of the study include among others that problem – solving learning group was found to be better than the conventional group performance.

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

In a similar study Lawal (2011) investigated the effect of demonstration and lecture method on academic achievement and development of creative traits in primary school students in Kwara State. The experimental group was taught using demonstration method while the control group was taught using lecture method, the null hypothesis of no significant difference is thus rejected. This by implication means that the students in the demonstration class performed better than those in the lecture method class. Hence demonstration produced a higher effect on students' performance.

The above study conducted has relationship with the on-going study because both studies used demonstration method of teaching and quasi experimental design in their methodology. The point of difference of the conducted research with this study is that it was carried out on academic achievement and development of creative traits while the current study is on economics. The conducted study was carried out in primary school, while the current study will be in secondary schools. The conducted study was carried out in Kwara State, while the current study is in Kaduna State.

Ogenyi (2012) investigated on the effects of problem – solving method on the academic achievement of slow learners in physics in secondary in Kaduna State. He used two experimental classes and two control classes, both groups were exposed to the same topic in physics from SS 2 curriculum materials. The experimental group was taught using problem – solving method while, the control group were taught same concept using lecture method. In his findings, the experimental group achieved a better result than the control group which implies that problem – solving method is effective than the lecture method of teaching physics.

The current research is related to the conducted research because both are in secondary schools in Kaduna State. They also used quasi – experimental design in their methodology. The point of departure was in the subject used, the conducted research was in physics while the current study will be carried out in economics. However, the research failed to formulate null hypothesis to further probe into the research questions.

Soyibo (2012) investigated the effects of instructional strategies on achievement of secondary school students in commerce in Niger State. He use three (3) experimental classes and three (3) control classes, both groups were exposed to the same curriculum materials, the difference was that the experimental group was taught using demonstration method, while the control group was taught using the lecture method. It resulted that the experimental groups achieved significantly better than the control groups on commerce achievement test (CAT). This research is investigating the effects of demonstration and problem – solving method of teaching on performance of student in senior secondary two students.

However, the point of relationship of the conducted study with this present one is that both are carried out in secondary schools and they also used quasi – experimental design in their methodology. The point of departure from the on-going study is that while the above conducted research was based on commerce students, the ongoing study is based on economics students. Moreso, while the above conducted study was carried out in Niger State the present study will be carried out in Kaduna State.

2.9 Summary of Literature Review

The concept of economics was defined in this work as the social science which studies human behaviour as a relationship between ends and scare means which have alternative uses. As social sciences, economics deals mainly with the activities of man. By ends, it means human wants, desires or needs. These human want are numerous relative to resources, use in satisfying them. By scare means, this means the limited available resources used in satisfying numerous human wants. By Alternative uses, it means that these scare resources can be used for difference purposes. Economics concepts were discussed which include, want scarcity, scale of performance, choice, opportunity cost. This chapter reviewed literature related to the study. The review highlighted on learning style which of course differ from individual to individual. It further highlighted the importance of effective teaching which has to do with the ability of the teacher to select and use appropriate methods of teaching that will bring about the achievement of the stated objectives of the lesson.

A number of teaching methods for economics teacher were, identified, the review include: lecture, demonstration, problem – solving, discussion, field trip and cooperative methods. Furthermore, the chapter discussed in detailed the problem – solving method of teaching which allows the learner to use their previous findings to handle problem and the demonstration method which provide 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 comparative study of using problem – solving and demonstration method on secondary school students performance in financial accounting in Gombe State. Effects of demonstration method on academic achievement of secondary school students in mathematics and others.

In the empirical studies reviewed, the researcher observed that none of the previous researchers talked on the teaching methods that are most appropriate to be use to enhance students participation at the secondary school level of education. They also did not state which method is most appropriate for the male and female students at the secondary school level of education. In view of the above, there are some of the gabs noticed, which they current research has filled. It is pertinent to find the most effective way a teaching economics so that less-time is spent on this teaching and learning it is also necessary to produce knowledgeable graduates in economics so that they can contribute meaningfully to the development of the country

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter focuses on the methodology used for the study. The chapter is presented under the following sub-heading:

3.1 Research Design

3.2 Population for the Study

3.3 Sample size and Sampling Procedure

3.4 Instrument for Data Collection

3.4.1 Validation of the Instrument

3.4.2 Pilot study

3.4.3 Reliability of the Instrument

3.5 Procedure for Data Collection

3.6 Procedure for Data Analysis

3.1 Research Design

The research design for this study is Quasi–experimental design. Quasi – experimental design according to Olayiwola (2005) is the manipulation of independent variable (effects of demonstration and problem – solving methods) control of extraneous variables, the use of control and treatment groups and measurement of dependent variables through the use of statistical tools. Quasi–experimental design deals with intact group, this make it natural. The intact nature of the group enable the study to be carried out without the participants' knowledge of participating in an experiment.

The pre-test, post-test groups design involving three (3) cluster groups of intact classes having co-education students were used. Three (3) groups which are the experimental having two groups and one control group. The experimental groups were exposed to instructional package on demonstration and problem – solving method of teaching while the control group was exposed to instructional package on lecture method of teaching. The design is graphically illustrated thus:

EG	$\longrightarrow$	01	$\longrightarrow$	DM		Q2
EG	$\longrightarrow$	01	$\longrightarrow$	PSM		Q2
CG	$\longrightarrow$	01	$\longrightarrow$	LM		Q2

Where

CG	=	Control group
EG	=	Experimental group
Q1	=	Pre – test
Q2	=	Post-test
LM	=	Lecture method
DM	=	Demonstration Method
PSM	=	Problem – Solving

3.2 Population of the Study

The population of the study consists of all economics students in co-education public secondary schools that are registered with WAEC and NECO in Kaduna State.

A total of one hundred and twenty-one (121) students in government commercial college Zaria were used. The details of these are as shown in appendix xi and the summary is as given in table 3.1.

Table 3.1 Population of the Study

Name of school	Males	Females	Total
Govt. Comm. College Zaria	82	39	121

Source: Ministry of Education Kaduna State 2015.

3.3 Sample Size and Sampling Procedure

The sample size for the study is drawn from Government Commercial College Zaria. Proportionate sampling techniques was used to select the sample size. Experimental research design allows the choice of a school close for effective study and also for proper control of extraneous variables (Williams, 2006). From the school a total number of one hundred and twenty one (121) SS II students are offering economics out of which ninety (90) students was used in this study. This comprises of sixty (60) males and thirty (30) females students were randomly selected and randomly assigned to the three groups, that is experimental group I, experimental group II and control group. The experimental group I was exposed to demonstration method of teaching and the experimental group II was exposed to problem – solving method of teaching, while the control group was taught the same concept using lecture method. This is in line with Gay and Dielhi (2006) who stated that a sample size of ninety (90) subjects minimum out of a population for the groups in an experimental study is suitable depending on the environment and the available facilities to be used. Roscoe (2006) also stated that a small sample size from the parent population for an experimental design is adequate and convenient. The breakdown of the sample size is shown in table 3.2.

Table 3.2 Sample Size

Name of school	Males	Females	Total
Govt. Comm. College Zaria	60	30	90

Source: Ministry of Education Kaduna State

The procedure for selecting the ninety students from the classes was done through the use of intact sample in their natural setting. The whole class was used for the pre-test, after the pre-test, students that score 20 marks and above were selected through simple random sampling using the that drawn technique. The students who scored more than 20 and above exceed the required number the researcher want to use, so the research has to used the hat drawn technique. The researcher wrote 'yes' and 'no' on pieces of papers, equal to the number of students require. These papers were folded and scrambled and put in a container, shake very well then the students were asked to pick one each. The researcher wrote 20 'yes' in the pieces of papers for males and 10 'yes' for the females in each class. Those that pick 'yes' were used for the study.

3.4 Instrument for Data Collection

Based on the fact that the research study is a quasi-experimental research design, the topic used in 'trade' which is in the content of economics curriculum in SS 2. Lesson plans were prepared as a guide for both demonstration, problem – solving and lecture methods for effective teaching of the topic stated. Details of the lesson plans are shown in appendices vi – xi. After which an economics achievement test (EAT) was designed by the researcher using passed questions paper of the West African Examination Council (WAEC) and National Examination Council (NECO) which were administered to the students for both pre-test and post-test.

The test is divided into two sections, section A consist of twenty (20) objectives questions, which carry 3 marks each, given a total of 60 marks for this section, while section B consist of three essay questions to answer any two. Each question in section B carry 20 marks giving a total of 40 marks. The details of the instruments and marking scheme are shown in appendix III.

3.4.1 Validity of the Instrument

In order to ensure the validity of the test instrument standardized questions were selected from past WAEC and NECO Examination (2009, 2010) and given to two lecturers who are not below the rank of senior lecturers in the department of Vocational and Technical Education, Faculty of Education, Ahmadu Bello University, Zaria to vet for relevance of the questions to the topic to be taught. They examined the appropriateness of the items in terms of reading difficulty of the students, the clarity of the statements in the instrument, checking possible errors in the instruments, some questions were restructured by the supervisors. Their corrections and suggestions were used to 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 was conducted in one selected private co-education senior secondary school (First Baptist High School) in Kaduna State, using 20 students. This school is not part of the population of the study, but the choice was influenced by the location and they offer economics with the same characteristics with the study area. The pilot study was conducted to obtain the reliability of the instrument, that is if the students can answer the questions. After the test the scripts were collected and mark by the researcher. The result gotten was then used to test 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 haves 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 pearsons product moment correlation coefficient of 0.87 for the instrument. This reliability coefficient is high and positive the instrument was adjusted reliable and stable. According to Nwaorgu (2007) recommendation, who started that a reliably estimated 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

In order to carry out a proper administration of the instruments, the researcher collected a letter of introduction from the Department of Vocational and Technical Education, which can be seen in appendix 1. Based on the fact that the research study is an quasi-experimental research design, the researcher used the topic trade which is in the curriculum of the SS II students Economics. Lesson plans were prepared for each of the groups, samples can be seen in appendix v-ix. The researcher took three weeks to teach the students. The experimental group was exposed to instructional package based on demonstration method of teaching, and experimental group II was exposed to instructional package on problem solving method of teaching, while the control group was also exposed to instructional package on lecture method.

The test consist of two sections: A and B. Sections A consisted twenty (20) objective questions which carried three marks each giving the total of 60 marks for this section, while section 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 instruments are shown in appendix iv and the breakdown of the groups are shown in table 3.3.

Table 3.3 Break down of the Groups

School	**Group**	**Males**	**Females**	**Selected**
GCC Zaria	Exp. Group I	20	10	30
	Exp. Group II	20	10	30
	Control Group	20	10	30
Total		**60**	**30**	**90**

Source: Field study, 2015

3.6 Procedure for Data Analysis

The mean performance of students for post-test for the experimental groups were computed and compared to answer the research questions. Means, (x) standard deviation

(SD) and standard error (SE) were used to analyse the data that were collected to answer the research questions. The means and standard deviation has proved to be one of the most effective methods of answering research questions according to Olayiwola (2005). 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 according to Nworgu (2007). The t-test variation is required for comparison of two means of same group in a pre-test, post-test situation. ANOVA was used to test the null hypothesis five, the ANOVA has proved to be one of the most effective methods of comparing three group means according to Bonet (2004). 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

4.2 Testing of Null Hypotheses

4.3 Discussion of Findings

4.4 Summary of Data to Answer Research Questions

4.1 Analysis of Data

Analysis of students' performance in economics achievement test for post-test were used in answering the five research questions. The analysis is presented in table 4.1 to 4.5.

Answers to research questions

Research question one: what is the effect on the mean academic performance of students taught economics using demonstration and those taught using lecture method?

The data to answer research question one were analysed in table 4.1.

Table 4.1 Mean scores of students performance in economics exposed to demonstration and lecture methods of teaching.

Groups	N	DF	Mean	SD	SE
Demonstration method	30	29	64.63	5.115	.934
Lecture method	30	29	46.16	6.117	1.116

Source: Field Study, 2015

Based on the data presented in table 4.1 there are thirty students each in demonstration and lecture groups. The students taught using demonstration method of teaching economics had a mean (x) of 64.63, standard deviation (SD) of 5.11 and standard error of mean (SE) of .93, on the other hand, students taught using lecture method of teaching had a mean (x) of 46.16, standard deviation (SD) of 6.11and standard error of mean (SE) of 1.11, with a degree of freedom of 29. Comparing the mean of students in the two methods, it could be seen that the student taught using demonstration method had mean performance of 64.63 which is greater than the mean of 46.16 of student taught using lecture method. The students taught using demonstration method performed better than those taught using lecture method. The mean difference showed that the demonstration method group was better than the lecture method group by 18.47 mean different.

This higher score clearly shows that the demonstration method of instruction has more effect on students' performance then those who were taught through the conventional method of teaching the subject. However, the test of significant of the variability between the two groups was carried out in hypothesis one. It could however be said that demonstration method of instruction have more effect in enhancing the academic performance of students in economics.

Research Question two: What is the effect on the mean academic performance of students taught economics using problem-solving and those taught using lecture method?

The data to answer research question two were analysis in table 4.2.

Table 4.2: Mean scores of students performance in economics exposed to problem- solving and lecture methods of teaching.

Groups	N	DF	Mean	SD	SE
Problem Solving method	30	29	66.55	4.97	.90
Lecture method	30	29	46.16	6.11	1.11

Source: Field Study, 2015

Furthermore, the data presented in table 4.2 showed that there were also thirty students each in problem solving and lecture method groups. The student taught using problem solving method of teaching economics had a mean (x) of 66.55, Standard Deviation (SD) of 4.97 and Standard Error of mean (SE) .90. On the other hand, students taught using the lecture method of teaching had a mean (x) of 46.16, standard deviation (SD) of 6.11 and standard Error (SE) of 1.11, with a degree of freedom of 29. Comparing the mean of students in the two methods, it could be seen that the students taught using problem solving method had a mean performance of 66.55, which is greater than the mean of 46.16 of students taught using lecture method. The students taught using problem solving method performed better than those taught using the lecture method. The mean difference showed that the problem solving group was better than the lecture method group by 20.39 mean difference.

This means that the used of problem solving method of instruction could be said to have greatly improved the performance of the students in the subject. This could be as a result of the active participation of the students in the lesson. However, the test of significant of this variability between the two groups were carried out in hypothesis two.

Research Question Three: What is the effect on the mean academic performance of male and female students taught economics using demonstration method?

The data to answer research question three was analysed in table 4.3.

Table 4.3: Mean scores of males and female students performance in economics exposed to demonstration method of teaching.

Gender of demos. Method group	N	DF	Mean	SD	SE
Male	20	29	65.00	5.60	1.36
Female	10	29	62.15	4.56	1.26

Source: Field Study, 2015

Also, data presented in table 4.3 has twenty males and ten females students each in demonstration method of teaching. The male students taught using demonstration method of teaching economics had a mean (x) of 65.00, standard deviation (SD) of 5.60

and standard Error of mean (SE) of 1.36. On the other hand, the female students taught using the demonstration method had a mean of 62.15, standard deviation (SD) of 4.56 and standard error (SE) of 1.26, with a degree of freedom of 29. Comparing the mean of male and female students in the demonstration learning method, it could be seen that the male students taught using demonstration method had a mean 65.00. While the mean performance of the female students taught using demonstration method had 62.15. The male students taught using demonstration method did not performed better than the female students who were also taught using the same demonstration method, because the performed almost at the same level of mean performance. The mean differences showed that the male students performance was not better than the female students performance using the same demonstration method by 2.85 mean difference, which showed that the have almost the same level of mean performance.

This means that there is no much variability in the observed mean in the table. This is a clear indication that the two groups (male and female) benefited equally in the used of the demonstration method of instruction. However, the significance of the observed variability in the mean is subjected to statistical test in the related hypothesis. From the scores, it could be said that the used of demonstration method of instruction have equal enhancement on the academic performance of male and female students in the school selected.

Research Question Four: What is the effect on the mean academic performance of male and female students taught economics using problem-solving?

The data to answer research question four was analysed in table 4.4.

Table 4.4: Mean score of male and female students performance in economics exposed to problem – solving method of teaching.

Gender of Problem solving method group	N	DF	Mean	SD	SE
Male	20	19	67.52	5.372	1.302
Female	10	09	64.26	4.270	1.184

Source: Field Study, 2015

The data presented in table 4.4, showed that there were twenty males and ten females students in problem solving group. The male students taught using problem solving method had a mean (x) of 67.52, standard deviation (SD) of 5.37 and Standard Error (SE) of 1.30. On the other hand, female students taught using problem solving method had a mean of 64.26, standard deviation (SD) of 4.27 and standard error of mean (SE) of 1.18, with a degree of freedom for males was 19, while that of the females was 09. Comparing the mean of male and female students in the problem solving method, it could be seen that the male students taught using problem solving method had mean of performance of 67.52 which is greater than the mean of 64.26 of female students taught using the same method. The male students taught using problem solving method did not performed better than the male students who were also taught using the same problem solving method, because they had almost the same level of mean performance. The mean difference showed that the male students did not performed better than the female students using the same problem solving method by 3.26 mean difference.

This means that there is no much variability in the observed mean in the table. The two groups (male and female students) was practically the same. This means that the used of problem – solving method of instruction was not seriously influenced by their gender. In other words, the male and female students did not performed differently when exposed to the used of problem solving method of teaching economics in the school selected.

Research Question Five: What is the effect on the mean academic performance of students taught economics using demonstration, problem-solving and lecture method?

The data to answer research question five was analysed in table 4.5.

Table 4.5: Mean scores of students performance in economics exposed to demonstration, problem-solving and lecture methods of teaching.

Groups	N	DF	Mean	SD	SE
Problem solving method	30	29	66.55	4.97	.9085
Demonstration method	30	29	64.63	5.11	.9340
Lecture method	30	29	46.16	6.11	1.11

Source: Field Study, 2015

The outcome of table 4.5 showed that there were thirty students in each group of demonstration, problem solving and lecture method of teaching. Students taught using the problem solving method of teaching had a mean of 66.55, those taught using demonstration method of teaching had a mean of 64.63, while those taught using lecture method had a mean of 46.16, with a degree of freedom of 29 for each method. Comparing the mean of students in the three methods, it could be seen that the student taught using the problem solving method had a mean performance of 66.55 which is greater than the mean of 64.63 and 46.16 of students taught using demonstration and lecture method. The students taught using problem solving method performed better than those taught using demonstration and lecture method. The mean difference showed that the problem solving method group was better than the demonstration and lecture method group by 20.39 mean difference.

This means that there is much variability in the observed mean in the table. This is a clear indication that the three groups (demonstration, problem – solving and lecture methods) students did not benefited equally in the used of the three methods. It could however be said that problem-solving method of instruction has more effect on the student followed by demonstration and lecture methods respectively. However, the test of significant of this variability between the three groups were carried out in hypothesis five.

4.2 Testing of Null Hypotheses

Five null hypotheses were postulated for the study to further probe into the research questions. Therefore, the post-test scores of students' performance were tested at 0.05 level of significant and the result interpreted. The null hypotheses were tested using t-test statistics. The test of the hypotheses were presented in tables 4.6 to 4.11.

Null Hypothesis One: There is no significant effect on the mean of academic performance of students taught economics using demonstration and those taught using lecture method.

The data in table 4.6 was used to test the effects of using demonstration and lecture methods of teaching.

Table 4.6: t-test of mean scores of students performance in economics exposed to demonstration and lecture methods of teaching.

Groups	N	Mean	SD	Df	t cal.	t-cri.	P. Value	Rmk
Demos. method	30	64.63	5.11	58	5.85	1.96	0.00	Rej.
Lecture method	30	46.16	6.11					

***p* < 0.05, Calculated**

Source: Field Study, 2015

Table 4.6 showed the result of T-test used for testing the significant effect between the performances of student taught economics using demonstration and lecture method. The data from the table revealed that the group taught using demonstration method of teaching economics had a mean score of 64.63, standard deviation (S.D) of 5.11. The t-calculated was 5.85, while t-critical was 1.96, since the t-calculated was 5.85 was greater than the t-critical at 1.96, it implied that there was significant difference between the performances of students taught economics using demonstration and lecture methods. Therefore, the null hypothesis one that state that there is no significant differences between mean performances of those taught using demonstration and those taught using lecture method was rejected.

Null Hypothesis Two: There is no significant effect on the mean of academic performance of students taught economic problem-solving and those taught using lecture method.

The data in table 4.7 was used to test the effects of using problem – solving and lecture methods of teaching.

Table 4.7: t-test of mean scores of students performance in economics exposed to problem-solving and lecture methods of teaching.

Groups	N	Mean	SD	Df	t cal.	t-cri.	P Value	Rmk
Prob. Sovl. Meth.	30	66.55	4.97	58	7.21	1.96	0.00	Rej
Lecture meth.	30	46.16	6.11					

***p* < 0.05, Calculated**

Source: Field Study, 2015

Table 4.7 shows the result of t-test used for testing the significant effect between the performances of students taught using problem-solving and lecture method. The data from the table revealed that the group taught using problem-solving of teaching economics had a mean score of 66.55, Standard Deviation (S.D) of 4.97. While those taught using the lecture method had a mean score of 46.16, Standard Deviation (S.D) of 6.11. The t-calculated was 7.21 while the t-critical was 1.96. Since the t-calculated 7.21 was greater than the t-critical, it implied that there was significant effect between the performances of students taught using problem-solving method and lecture method. Hence, the null hypothesis two that state that there is no significant effect between the mean performance of those taught using problem-solving and those taught using lecture method was rejected.

Null Hypothesis Three: There is no significant effect on the mean of academic performance of male and female students taught economic using demonstration method.

The data in table 4.8 was used to test the effects of using demonstration method in teaching male and female students.

Table 4.8: t-test scores of male and female student performance in economics exposed to demonstration methods of teaching.

Gender of demos Meth. Group	N	Mean	SD	Df.	t cal.	t-cri.	P. Value	Rmks
Male	20	65.00	5.60	28	0.44	1.96	0.66	Ret.
Female	10	62.15	4.56					

***p* > 0.05, Calculated**

Source: Field Study, 2015

Table 4.8 showed the result of t-test used for testing the significant effect between the performance of male students taught economics using demonstration method and female students' taught using the same method. The data from the table revealed that the male students' who are taught using the same method had a mean score of 65.00, Standard Deviation (S.D) of 5.60. The t-calculated was 0.44 while t-critical was 1.96. Since the t-calculated was 0.44 was less than the t-critical of 1.96, while the female students taught using demonstration method of teaching economics had a mean score of 62.15, Standard Deviation (S.D) of 4.56. It then, implied that there was no significant effect between the performance of the male and female students taught economics using demonstration and lecture method. Therefore, the null hypothesis three states that there is no significant effect between the performance of male and female students taught using demonstration method was accepted and retained.

Null Hypothesis Four: There is no significant effect on the mean of academic performance of male and female students taught economics using problem-solving method.

The data in table 4.9 was used to test the effects of using problem – solving method in teaching male and female students.

Table 4.9: t-test of means scores of male and female students performance in economies exposed to problem –solving methods of teaching.

Prob. Sovl. Meth. Group	N	Mean	SD	Df	t cal.	t-cri.	P. Value	Rmks
Male	20	67.52	5.37	28	1.24	1.96	0.22	Ret.
Female	10	64.26	4.27					

p > 0.05, Calculated

Source: Field Study, 2015

Table 4.10 showed the result of t-test used for testing the significant effect between the performances of male students taught economics using problem-solving method and female students' taught using the same method. The data from the table revealed that the male students who are taught using the same method had a mean score of 67.52 and Standard Deviation (S.D) of 5.37. The t-calculated was 1.24 while t-critical was 1.96. Since the t-calculated 1.24 was less than the t-critical 1.96. While the female students' taught using problem-solving method of teaching economics had a mean score of 64.26 and Standard Deviation (S.D) of 4.27. It implied that there was no significant effect between the performance of male and female students taught economics using the same problem-solving method. Therefore, the null hypothesis four that states that there is no significant effect between mean score performance of male and female students taught using problem-solving method was accepted and retained.

Null Hypothesis Five: There is no significant effect on the mean of academic performance of students taught economics using demonstration, problem-solving and lecture methods.

The data in table 4.10 was used for testing the differences between the demonstration, problem –solving and lecture method of teaching.

Table 4.10: ANOVA was used for testing the differences between demonstration, problem-solving and lecture methods of teaching.

Groups	**Sum of square**	**Df**	**Mean Square**	**F**	**F Cri.**	**P. Value**	**Rmk.**
Between Groups	1831	3	915.8	31.09	2.60	.00	Rej.
Within groups	2562	87	29.45				
Total	**4394**	**90**					

Source: Field Study 2015

Table 4.10 showed the result of ANOVA used for testing the differences between the students exposed to demonstration, problem – solving and lecture methods of teaching. The data from the table revealed that the between groups has a difference of 3 while the within groups has a difference of 87. While the mean square has a between group score of 915.8 and within groups score of 29.45, with critical vale of 2.60. these does not show the difference between the three methods. The researcher has to run a post hoc using the Scheffe test to show the difference between the three methods, which is shown in table 4.10.

The data in table 4.11 showed the difference between demonstration, problem – solving and lecture methods of teaching.

The table 4.11: Post Hoc scheffe test mean scores of students performance in economies exposed to demonstration, problem -solving and lecture methods of teaching.

Group	**N**	**Subset for alpha = 0.05**			**Rmks**
		1	2	3	
Lecture method	30	46.16			Rej.
Demonstration method	30		64.63		
Problem solving method	30			66.55	
Sig.		**0.000**	**.396**	**.569**	

Source: Field Study 2015

Result of the Analysis of Variance (ANOVA) statistics showed that significant differences exist in the mean academic performance of the students on the basis of their treatment groups. This is because the calculated p (Sig) value of 0.000 was found to be lower than the 0.05 alpha level of significance. Their mean academic performance on the basis of their treatment groups are 66.55, 64.63 and 46.16 by students in problem solving method, demonstration method and lecture method respectively. The post hoc using the scheffe test showed that lecture method is the least follow by demonstration method and problem solving is the highest in the subset. Therefore the null hypothesis, which state that there is no significant difference in the mean academic of the students on the basis of their treatment groups, is hereby rejected.

4.3 Summary of Major Findings

The following are the major findings of the study:

1. These was significant difference between the mean performance of students taught economics using demonstration method and lecture method. It indicated that demonstration method performed better with a mean difference of 18.47

above the lecture method group. This implied that demonstration method is better than the lecture method.

2. There was significant difference between the mean performance of students taught using problem – solving and lecture method. Problem – solving performed better with mean difference of 20.39 above the lecture strategy group. This implied that problem – solving method is better than the lecture strategy.

3. There was no significant difference between the mean performance of male and female students taught using demonstration method. The means score of male was 65.00 while that of the female was 62.15 which shows that there is no difference in their performance.

4. There was no significant difference between the mean performance of male and female students taught using problem – solving method. The mean score of male was 67.52 while 64.26 was for the females. The above mean score show that there is no difference between the male and female counterpart in the use of the problem – solving method.

5. There was significant difference between the mean performance of students exposed to the three groups. Problem-solving performed better with a mean difference of 18.47, while demonstration method also has a mean score of 20.39 above the lecture method group. This showed that the problem-solving group and the demonstration group performed better than the lecture method group.

4.4 Discussions of Findings

This research work was specifically carried out to determine the effect of demonstration and problem – solving methods on performance on secondary students in economics in Kaduna State. In order to achieve the purpose, five objectives, research questions and research hypotheses were raised.

Research question one that stated, what is the effect on the mean academic performance of students taught economic using demonstration and those taught using lecture method? The null hypothesis one state that there is no significant effect on the mean academic performance of students taught economics using demonstration and those taught using lecture method.

The study found that there was significant mean difference between the performance of demonstration group and the lecture method group. The demonstration group performed significantly better than the lecture method group with a mean difference of 18.47.

This findings is in line with Jerome and Olalekan (2000), Mohammed (2007) Johnson and Obeka (2011) who found that demonstration method is suitable in teaching students specially at the middle age because they found the method interesting. Also Jackson (2007) stated that students do well when they work together, their findings agreed with Bhardwaj (2008) who suggested that demonstration method should be placed as core in the educational curriculum due to its effectiveness in teaching and learning processes. And disagree with research hypotheses one which states that there is no significant effect on the performance of economics students taught using demonstration method and those taught using lecture method.

Research question two that stated, what is the effect on the mean academic performance of students taught economics using problem–solving and those taught using lecture method? And the null hypothesis two state that there is no significant effect on the mean academic performance of students taught economics using problem – solving and those taught using lecture method.

The findings revealed that there was significant mean difference between the performance of problem – solving group and the lecture method group. The problem – solving group was found to performed better than the lecture method group with a mean difference of 20.39. This finding is in line with Dewey (2006) who stated that problem – solving method is an active strategy which enables the students to become aware of and determine his/her problem – solving ability and leaving needs. Also Olamie (2006) and Ogenji (2010) stated that problem – solving in this present era, is most extensively used nearly in all areas. Concerning the performance of students taught using lecture method, it was seen that the students performed very low compare to the other two methods with the mean difference of 18.47 and 20.39 respectively. This is in line with Ajoma (2009) who stated that lecture method should be discourage in our secondary schools. Okwilagwe (2009) was of the opinion that lecture method only encourage students to cram facts which are easily forgotten as such it result to poor performance on the side of the students. That is why it should be discouraged in our secondary schools.

Among the three method compared in this study, problem – solving was found to be better, followed by demonstration method and lecture method. This implied that problem – solving method is a more effective teaching method among the three teaching methods (demonstration, problem – solving and lecture methods) in the study. This is in line with Adeyeni (2008) who found that problem – solving method is a better method of teaching in secondary schools.

Research question three, stated that, what is the effect on the mean academic performance of male and female students taught economics using demonstration method? And the null hypotheses that stated there is no significant effect on the mean academic performance of male and female students taught economics using demonstration method. The null hypotheses was rejected because the performance of male and female students taught using demonstration teaching methods, have mean score of 65.00 for male and the performance mean score of 62.15 for female which showed that there is no effect in the performance of the males and females on the methods used. Which is in line with Olamie (2006) and Ogenji (2010) who confirmed that method of teaching does not affect gender.

Research question four that stated, what is the effect the mean academic performance of male and female students taught economics using problem–solving method? And the null hypothesis stated that there is no significant effect on the academic performance of male and female students taught using problem – solving method. The null hypothesis was retained because the performance of males and females taught using problem-solving method have mean scores of 67.52 for male and a mean scores of 64.26

for female which showed that there is a significant different in the performance of male and female students.

As regards the performance of males and female students taught using problem – solving method, male has a means score of 67.52 and the female has 64.26 which shows that there is no difference in there performance with regards to the method used, from the discussion above it shows that there is no difference between the male and the female with regard to the use of the two methods.

Research question five states that, what is the effect on the mean academic performance of students taught economics using demonstration, problem-solving and lecture method? And the null hypothesis state that there is no significant on the mean academic performance of students taught economics using demonstration, problem-solving and lecture methods.

As regards the performance of the demonstration, problem-solving and lecture methods, demonstration method has a mean score of 64.63, lecture method has 46.16 while problem-solving has 66.55 which shows that there is a significant effect in there performance with regard to the three method used, from the discussion, above it shows that there is a difference between the demonstration, problem-solving and lecture methods.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The study was on effects of demonstration and problem – solving methods on performance of secondary school students in economics in Kaduna State. The study had one major objective which is to determine the effects of demonstration and problem-solving methods on performance of secondary school students in economics in Kaduna State. The study had five specific objectives, five research questions, and five null hypothesis. The study reviewed a lot of literatures that are related to the study.

The population of the study comprised of 121 students with a sample size of sixty students were selected for the study. The technique used for the selection of the experimental sample for the study was random sampling technique. The instruments used for collection of data for the study were the questionnaire and Economics Achievement Test (EAT). The data collected from the students pre-test and post-test scores were statistically analyzed. The four null hypotheses were tested at 0.05 level of significance. The T-test way use to test the hypotheses one to four. Mean and standard deviation were used to answer the research questions.

The followings are the summary of the major findings of the study:

1. There was significant effect of using demonstration method in teaching on students performance in economics. Their calculated mean performance were 64.63 and 64.16 by subjects taught with Demonstration method and those taught

with lecture method respectively. This implies that the students taught economics using the demonstration method have significantly higher mean performance than their counterparts taught using the lecture method.

2. There was significant effect of using Problem-Solving methods in teaching on students performance in economics. Their calculated mean performance were 66.55 and 46.16 by subjects taught with Problem Solving methods and those taught with lecture method respectively. This implies that the students taught economics using the Problem Solving methods have significantly higher mean performance than their counterparts taught using the lecture method.

3. There was no significant effect of t using Demonstration method in teaching on male and female performance in economics. Their calculated mean performance were 65.00 and 62.15 by male and female students taught with demonstration method respectively. This implied that the male and female students taught economics using demonstration method have almost the same level of mean performance.

4. There was no significant effect of using Problem-solving method in teaching on male and female performance in economics. Their calculated mean performance were 67.52 and 64.26 by male and female students taught with Problem solving method respectively . This implied that the male and female students taught economics using Problem solving method have almost the same level of mean performance.

5. There was significant difference in the academic performance of students exposed to demonstration method problem – solving and lecture method.

Problem-solving method performance better with a mean difference of 2.00 and 20.39 above the demonstration and lecture method of teaching. This implied that problem-solving method is the best of all the three methods compared in this study.

5.2 Contribution to Knowledge

This study has contributed to knowledge in the following ways:

1. This study have been able to identify two methods (problem- solving and demonstration method) of teaching as being affective for teaching economics in senior secondary school in Kaduna state.
2. Teachers can have in addition to other methods of teaching (problem- solving and demonstration) of teaching the students for improved performance in economics.
3. It will call for workshops and seminars to be organized for the teachers in capacity building in the use of these methods of teaching.

5.3 Conclusion

Based on the analyses of the data collected as well as the findings of the study, it was concluded that since students performed better in problem–solving than demonstration and lecture methods, it means that the problem – solving method is the most effective method of teaching economics in senior secondary school. Thus, it implies that problem solving method if applied, will lead to a better understanding of the subject, and also improve the performance of the students when they graduate. Consequently, lead to the development of the nation's economy.

5.4 Recommendations

Based on the findings and conclusions of the study the following recommendations are made by the researcher.

1. Teachers should use more of problem-solving and demonstration method in teaching economics in order to improve the performance of the students.
2. Problem- solving and demonstration method of teaching should be use for both sexes, since there in no significant difference between their performances.
3. Workshops and seminars should be organize for teachers in the use of these method of teaching.

5.5 Limitation of the Study

During the course of this work, a number of limitations or challenges were experienced by the researcher among them are:-

1. The current curriculum approved by the Federal Ministry of Education in public schools restricted economics to only students offering commercial /art subjects. Therefore, the subjects (SS2 students) used in the study does not involve students in the sciences, which might have affected the result of this study.
2. The work involved printing the pre – test and post, the fluctuation of power in the country posed a serious challenge on the collection of data, but this was however overcome by the use of generator, which some students rejected as a result of poor print. This delayed researcher’s time for collection of data because of repeated prints.

5.6 Suggestions for Further Studies

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

1. Effects of demonstration method on the performance of students in business studies.
2. A comparative study of problem – solving and the lecture method in the teaching of economics in colleges of education.

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APPENDIX I

DEPARTMENT OF VOCATIONAL & TECHNICAL EDUCATION

AHMADU BELLO UNIVERSITY, ZARIA, NIGERIA.

FACULTY OF EDUCATION

VICE CHANCELLOR: Prof. Ibrahim Garba (B.Sc., M.Sc. (A.B.U.); Ph.D. (London) D.I.C.) Telephone: 069-51755, 50692

HEAD OF DEPARTMENT: Professor A. A. Udoh (B.Ed. (Hons) Nsukka; M. Ed. & Ph.D. Bus Edu. [A.B.U.])

Date: 30th September, 2015

Your Ref:

Our Ref: M.Ed/Educ/2769/11-2012

Letter of Introduction

KABOSHIO KAGAI – M.ED/EDUC/2769/2011-2012

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: ***Effects of Demonstration and Problem-solving Methods on Performance of Secondary School Students in Economics in Kaduna State, Nigeria.***

Please, kindly give him every assistance he may require.

DEPT. OF VOC. & TECH. EDUCATION HEAD OF DEPT DATE A.B.U. ZARIA

Professor A.A. Udoh
HEAD OF DEPARTMENT

APPENDIX II

Summary of West Africa Examination Council Result for Economics From 2010 - 2013

Year	No. of Students	No of Distribution	No. of Credit	No of Passes	No of Fails	Total No. of Passes	% Passed	% Failed
2010	2,388	0	180	376	1,832	556	23.28	76.72
2011	2,128	0	220	272	1,636	492	23.12	76.88
2012	2,496	0	112	340	2,044	452	18.11	81.89
2013	3,860	0	164	356	3,340	520	13.47	86.53

Source: Ministry of Education Kaduna State, 2015.

APPENDIX III

STUDENTS' QUESTIONNAIRE

Please follow the instruction as you are asked to do

Name of School: ____

Name of Student____

Name of Subject: Economics

Section A: Objective

Instruction: Answer all questions 3 marks each.

Each question is followed by four options letter A-D. Find out the correct option for the correct option for each question and shade in pencil on your question paper. Give only one answer to each question.

Time allowed: 1 hr: 10 mins.

1. In the channel of distribution the breaking of bulk is performed by the

   a. A producer b. Wholesaler c. Retailer d. Consumer

2. Which of the following determines how much a consumer spend in a producers shop?

   a. An individual propensity to consume
   b. Level of consumer's income
   c. Level of consumers tax \
   d. Consumers taste/fashion

3. Which of the following is not a restriction to international trade?

a. Tariff b. Embargo c. Quota d. Reserves

4. Which of the following is the normal channel by which commodities reach the final consumers?

a. Manufacturer wholesaler, agent, retailer, consumer

b. Manufacturer, wholesaler, retailer, consumer

c. Manufacturer, wholesaler, sale representatives, retailer. consumer

d. Manufacturer, wholesale, retailer, agent, consumer

5. The removal of all artificial barriers to the flow of goods and services among countries.

a. License b. Barriers c. Liberalization d. By barter

6. Which of the following is a function of a retailer?

a. Banking Services b. Hoarding services

c. Storage services d. Sales service .

7. The retailer differ from the wholesaler because he

a. Owns a warehouse

b. Engage in bulk purchasing

c. Finance the producers

d. Keeps variety of goods and services

8. The exchange of goods for goods is referred to as

a. Barter b. Exchange c. Retail d. Goods

9. Trade between two countries is known as

a. Bilateral trade

b. Unilateral trade

c. Multilateral trade

d. Internal trade

10. The argument against the wholesaler is that he___

a. Breaks the bulk

b. Provides storage of goods

c. Supplies information to the producer

d. Sometimes create artificial scarcity

11. In the sale of which of the following commodities is a wholesaler most likely to be by-passed?

a. Books b. Exported agricultural produce

c. Soft drinks d. Television sets

12. Tariff are duties placed on

a. Imports only b. Exports only

c. Both imports and exports d. Locally made goods

13. The type of tax levied on goods produced within a country is called.

a. Exercice duites b. Export duites

c. Purchase tax d. Tariff

14. Which of the following is not a problem of distribution in Nigeria?

a. Administrative bottle necksb. Inadequate storage facilities

c. Poor transportation net workd. Poor weather conditions

15. The introduction of tariffs and quotes

a. Reduce the prices of imports

b. Increase the demand for locally made goods

c. Discourage domestic industries from becoming more efficient.

d. Reduce the prices of locally made goods

16. One of the reasons why government may erect a trade barrier is to

a. Control foreign currencies

b. Protect infant industries

c. Promote importation

d. Diversify the economy

17. An exercise tax is imposed on goods

a. Smuggled into the country

b. Manufactured locally

c. Imported into the country

d. Sized by custom officials

18. International trade differs from internal trade because it

a. Involves the exchange of goods and services

b. Involves the use of receipts and invoice

c. Requires the use of currency

d. Takes place across national boundaries

19. International trade is desirable because it

a. May lead to over production

b. Brings about over-dependence of countries on one another.

c. Provide foreign market for local goods.

d. Brings about unhealthy competition and rivalries

20. Which of the following, is not a function of the wholesaler?

a. He stocks variety of goods

b. He buys in large quantities

c. He provides warehouses for the storing of goods

d. He makes money available to the manufacturer.

SECTION B: ESSAY

Instruction: Answer only 2 questions. All questions carry equal marks

1. List five reasons of foreign trade?
2. State and explain the chain of distribution.
3. Explain five problems encountered in international trade.

APPENDIX IV

PRE-TEST, POST-TEST OBJECTIVES

Question: Marking Scheme

Each question carries three marks

IB 2B 3D 4B 5C 5D 7D

8A 9A 10A 11C 12C

13A 14D 15B 16B 17B 18D 19C 20A

Pre-test, post-test essay marking scheme

Ql. The five reasons of foreign trade are:

a. Inequitable distribution of natural resources.

b. Difference in skills and technical know how

c. Differences in the level of industrialization

d. Cost of production

e. The need to expand local market

Q2. Explain the chain of distribution which is manufacturer -> wholesale -> Retailer -> Final consumer

a. Manufacturer - is the one that brings the factors of production together for goods to be created,

b. Wholesale - buys in bulk from the producer and sell in small quantities to the retailer.

c. Retailer - buys in small quantities from the wholesaler and selling bits to the final consumers.

d. Final consumers - He buys in bits from the retailer mostly for consumption, until the goods reach the final consumer, production is not said to be finished.

Q3. The problems encountered in foreign trade are:

i. The problem of distance - some countries may be far away from each other.

ii. The problem of transport and communication

iii. Artificial barriers, for instance, tariffs, import duties, quotas etc. iv. Climatic problem - scare away traders from other parts of the world,

v. Language problem - Countries with the same language trade more freely than the other way round,

vi. Negative attitudes to foreigners, discrimination based on the colour of the skin, eye and hair.

vii. Problem of politics - differences in Political opinion and ideologies cripple free flow of trade between countries.

APPENDIX V

Lesson Plan for Experimental Group I

School: Government Commercial College, Zaria

Subject: Economics

Mode of teaching: Demonstration

Group: Experimental Group I

Class: SSII

Topic: Trade

Unit Topic: Home trade

Time/Duration: 80 minutes (double period)

Date: 21st July, 2015

Average age of student: 17 years

No of Students:30

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

Specific objective:

i. Students should be able to state the meaning of trade
ii. List out the types of trade
iii. Explain the chain of distribution
iv. Explain the problems of internal trade.

Teaching aids: The students exercise books, charts, pictures, textbooks, students and chalkboard.

Previous knowledge: Students have already been taught production, which is the creation of goods and services to satisfy human wants.

Introduction: The lesson will be introduced by the teacher, asking students questions such as:

i. have you been to a market environment?
ii. What and who did you see in the market?
iii. The people you see in the market, what are they doing?

Presentation: The lesson will be presented using the following steps: Step I: Teacher presents the topic by explaining the terms trade to the students, the term trade refers to the exchange of goods and services with one another in other to satisfy human wants and also explain home trade and foreign trade.

Step II: Teacher will group the students into two groups. 3 students in group one and six students in group two, group one will be buying exercise books from group two, to show how trade takes place in either home or foreign trade.

Step III: Teacher will again group the students to illustrate the chain of distribution, using four groups of students of two students in each group. To illustrate how goods move from the manufacturer, wholesaler, retailer and final consumer. Hence, the teacher shows a chart that demonstrates the movement of the goods.

Step IV: Teacher will ask each student to study and write out in their exercise books the function of the wholesaler and retailers,

Step V: Teacher will illustrate the problems of internal trade, such as insecurity, lack of close substitute of commodities, poor transportation, inadequate storage, inadequate information of prevailing market conditions, hoarding, too many middlemen, nature of some commodities (perishable goods), absence of a large market.

EVALUATION: the teacher will evaluate the lesson as follows:

i. asking a student to define internal trade
ii. State the chain of distribution
iii. list two problems of internal trade

CONCLUSION: teacher will conclude the lesson as thus:

i. you remember I told you the definition of trade is ...
ii. You also remember I told you that the chain of distribution is ...
iii. You remember I told you that the problems of internal trade are

ASSIGNMENT: Read the next unit as thus:

i. What is foreign trade?

ii. The components of foreign trade and its problems.

Remarks: Is the topic achievable?

Answer: Is achievable

APPENDIX VI

Lesson Plan for Control Group

School: Government Commercial College, Zaria

Subject: Economics

Mode of Teaching: Lecture

Group: Control Group

Class: SSII

Topic: Trade

Unit Topic: Home Trade

Time/Durable: 80 minutes (double period)

Date 23rd July, 2015

Average age of students: 17 years

No of Students: 30

General Objective: By the end of the topic students should be able to Define trade correctly. Specific Objectives:

i. Students should be able to state the meaning of trade.
ii. List out the types of trade
iii. Explain the chain of distribution
iii. State the problems of internal trade Teaching Aids: Chalkboard

Previous knowledge: Students have already been taught production, which is the creation of goods and service to satisfy human wants.

Introduction: The lesson will be introduced by the teacher, asking students questions such as:

i. Have you been to a market environment?
ii. What and who do you see in the market?
iii. The people you see in the market what were they doing? Presentation: The lesson will be presented using the following steps:

Step I: Teacher present the topic by explaining the term trade to

The students, the term trade refers to the exchange of goods and services with one another in other to satisfy human wants, and also explain the types of trade, home trade and foreign trade.

Step II: Teachers explain the chain of distribution to the students.

Step III: Teachers list the functions of the wholesalers and retailers.

Step IV: Teachers state the problems of internal trade, such as, insecurity, lack of close substitute of commodities, poor transportation, inadequate storage, inadequate information prevailing market conditions, hoarding, too many middlemen, nature of some commodities, absence of a large market.

Evaluation: Lesson will be evaluated by the teacher, asking questions such as:

i. What is trade?

ii. Mention 2 types of trade?

iii. What are the problems of internal trade?

Conclusion: Teacher concludes the lesson thus as:

i. Teacher explain briefly, what trade is.

ii. State the chain of distribution

iii. List two problem of internal trade

Lesson ended by given them homework assignment

i. Read about foreign trade

ii. the reason for foreign trade

iii. The problems of foregoing trade

References

Remarks: Is the topic achievable

Answer: Yes is achievable

APPENDIX VII

Lesson Plan for Experimental Group I

School: Government Commercial College, Zaria

Subject: Economics

Mode of Teaching: Demonstration

Group: Experimental Group I

Class: SSII

Topic: Trade

Unit Topic: Foreign trade

Time/Duration: 80 minutes (double period) Date

Date: 24th July, 2015

Average age of student: 17 years

No of Students: 30

Sex: Males and females

General objective: By the end of the topic, students should be able to define foreign trade correctly.

Specific objectives:

i. Students should be able to state the meaning of foreign trade,

ii. List out the reasons for foreign trade

iii. State the problems encountered in international trade.

Teaching aids: The students exercise books, charts, pictures, textbooks, students and chalkboard.

Previous knowledge: Students have already been taught home trade, which is the buying and selling of goods and services within a country.

Introduction: The teacher introduces the lesson by asking students questions such as:

i. Have you seen a car before?

ii. Where is the car produced?

iii. Why is the car imported into Nigeria?

Presentation: The lesson will be presented using the following steps:

Step I: Teacher presents the topic by explaining the term foreign trade to the students the term foreign trade refers to the exchange of goods and services between one country and another and also explain the reasons for the exchange.

Step II: Teacher will group the students into two groups. 3 students in each group, group one will be buying textbooks from group two and group two will be buying textbooks from group one, to show how foreign trade takes place.

Step III: The teacher will again group the students to illustrate the problems encountered in foreign trade, using 2 groups of 3 students in each group and each group representing a country with a different language, currencies, climate, colour and distance.

Step IV: Teacher will illustrate the problems encountered in foreign trade such as language problem, problem of distance, climatic problems, and barriers.

Evaluation: The teacher will evaluate the lesson as follows:

i. Asking a student to define foreign trade

ii. State the reason for foreign trade

iii. List two problems encountered in international trade

CONCLUSION: Teacher will conclude the lesson as thus:

i. You remember I told you the definition of foreign trade is...

ii. You also remember I told you that the reasons for foreign trade are...

iii. You remember I told you that the problems encountered in foreign trade are...

ASSIGNMENT: Read, the next unit as thus:

i. What is the difference between exports and imports?

Remarks: Is the topic achievable?

Answer: is achievable.

APPENDIX VIII

Lesson Plan for Control Group

School: Government Commercial College, Zaria

Subject: Economics

Mode of Teaching: Lecture

Group: Control group

Class: SSII

Topic: Trade

Unit Topic: Foreign trade

Time/Duration: 80 minutes (double period)

Date:

Average age of student: 17 years

No of Students:30

Sex: Males and females

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

Specific objectives:

i. Students should be able to state the meaning of foreign trade,

ii. List out the reasons for foreign trade

iii. State the problems encountered in international trade.

Teaching Aids: Chalkboard

Previous knowledge: Students have already been taught home trade, which is the buying and selling of goods and services within the country. Introduction: The lesson will be introduced by the teacher, asking students questions such as:

i. Have you seen a car before?

ii. Where is the car produced?

iii. Why is the car imported into Nigeria?

Presentation: The lesson will be presented using the following steps:

Step I: Teacher presents the topic by explaining the term foreign trade to the students; the term foreign trade refers to the exchange of goods and services between one country and another.

Step II: Teacher list and explain the reasons for international trade, which include inequitable distribution of natural resources, differences in skills and cost of production.

Step III: The teacher state the problems encountered in international trade, which include the problem of distance, climatic problems, and currencies problems.

Evaluation: Lesson will be evaluated by the teacher, asking questions such as:

i. What is foreign trade?

ii. Mention 2 reasons for foreign trade?

iii. What are the problems encountered in foreign trade?

Conclusion: Teacher concludes the lesson thus as:

i. Teacher explain briefly, what foreign trade is.

ii. State the reasons for foreign trade

iii. List the two problems encountered in foreign trade.

Lesson ended by given them homework assignment.

ASSIGNMENT:

i. Read about import and export.

ii. Read about the Nigeria import and export

References

Remarks: Is the topic achievable?

Answer: yes, is achievable.

APPENDIX IX

Lesson Plan for Experimental Group II

School: Government Commercial College, Zaria

Subject: Economics

Mode of Teaching: Problem solving

Group: Control Group II

Class: SS II

Topic: Trade

Unit Topic: Home Trade

Time/Duration: 80 minutes (double period)

Date: 29th July, 2015

Average age of student: 17 years

No of Students:30

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

Specific objectives:

i. Students should be able to state the meaning of trade,
ii. List out the types of trade
iii. Explain the chain of distribution
iv. Explain the problem of internal trade.

Teaching Aids: Textbooks, exercise books, charts pictures and chalkboard

Previous Knowledge: Students have already been taught production, which is the creation of goods and service to satisfy human wants. students have been asked to write about the topic before now.

Introduction: The lesson will be introduced by the teacher, asking students questions such as:

i. Explain what is market environment is all about
ii. Which type of people did you see in the market?
iii. What are the people doing in the market?

Presentation of the Lesson

Step I: The Teacher ask the students to explain the term trade. The teacher explain the term trade. The teacher define trade as the exchange of good and services with one another in other to satisfy human wants.

Step II: The teacher ask the students to distinguish between home trade and foreign trade. Home trade is the exchange of goods and services within a country, while foreign trade is the exchange of goods and service between one country and another.

Step III: Teacher show example of some of the goods involved in home trade and foreign trade using charts, pictures, and textbooks

Step IV. Teacher ask the students to illustrate the chain of distribution. Teacher explain how goods move from the producer, wholesaler retailer, and consumer. The teacher than show a chart to the students.

Step V. The teacher ask the students to state the problem of internal trade, such as insecurity, lack of close substituted of commodities poor, transportation, inadequate storage in adequate information of prevailing market conditions, hoarding , too much middlemen, nature of some commodities (perishable goods) absence of a large market.

Evaluation: The teacher will evaluate the lesson as follows:

i. What is internal trade?

ii. Explain the chain of distribution

iii. State two problems of internal trade

Conclusion: Teacher concludes the lesson thus as:

i You remember I told you the definition of trade is …..

ii. Remember I told you the chain of distribution is ……

iii. The problems of internal trade are……..

ASSIGNMENT:

Read about the next unit and write short notes as thus

i. What is foreign trade?

ii. The reasons and problems of foreign trade.

Remarks: Is the topic achievable?

Answer: yes, is achievable.

APPENDIX X

Males / Female Post –Test Scores

Demonstration method		Problem solving method		Lecture method	
Male	**Female**	**Male**	**Female**	**Male**	**Female**
72	70-	67	66	50	35
62	57	69	67	40	48
58	56	62	66	42	50
70	66	60	64	45	60
71	68	61	68	50	50
59	58	75	56	42	55
68	67	67	67	39	57
76	65	63	63	50	52
55	59	58	67	36	68
63	62	66	65	40	50
60		68		45	
63		68		45	
62		58		40	
81		77		38	
60		70		42	
72		71		45	
62		68		35	
64		68		41	
59		67		43	
65		70		50	

Appendix XI

Co-education Secondary Schools in Kaduna State

Educational Zones and Schools	Male	Female	Total
Kaduna North Educational Zone			
Government Commercial College Zaria	82	39	121
Government Secondary School Hunkuyi	37	16	53
Government Commercial College Makarfi	62	26	98
Kaduna Central Educational Zone			
Government Commercial College Kawo Kaduna	79	44	123
Government Secondary School Sabon Tasha	67	47	114
Government Secondary School Barnawa Kaduna	63	38	101
Kaduna South Educational Zone			
Government College Kagoro	69	28	87
Government Secondary School Kafanchan	66	31	97
Government Commercial Samaru Kataf	55	39	94
Kaduna West Educational Zone			
Government Secondary School Birnin Gwari	51	28	79
Kaduna North Educational Zone			
Government Secondary School Saminaka	56	32	88
Government Secondary School Pambegwa	37	17	51
Total	**724**	**385**	**1,109**

Source: Ministry of Education Kaduna State 2015.