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

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July, 2017

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A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA IN PARTTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOROF PHILOSOPHY IN BUSINESS EDUCATION

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ZARIA, NIGERIA

July, 2017

DECLARATION

I declare that thisthesis titled Effects of Cooperative, Problem-Solving and DemonstrationTeachingMethodson Performance of Secondary School Studentsin Commerce in Kaduna State, Nigeria, has been carried out 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 thesis was previously presented for another degree or diploma at this or any other institution.

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Markus Yayock BUKIDate

CERTIFICATION

This thesis titledEFFECTSOF COOPERATIVE, PROBLEM-SOLVING AND DEMONSTRATION TEACHINGMETHODSON PERFORMANCE OF SECONDARY SCHOOL STUDENTS IN COMMERCE IN KADUNA STATE, NIGERIA,byMarkus Yayock BUKI meets the regulations governing the award ofDoctor of Philosophy in Business Education,degree of the Ahmadu Bello University,and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This research work is dedicated to my family and late parents.

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TABLE OF CONTENTS

	Pages
Title page-	i
Declaration	ii
Certification	iii
Dedication	iv
Acknowledgement	v
List of Appendices	ix
List of Abbreviations	x
List of Figure	xi
List of Tables	xi
Abstract	xiv
CHAPTER ONE: INTRODUCTION	
1.1 Background to the Study	1
1.2 Statement of the Problem	4
1.3 Objectives of the Study	6
1.4 Research Questions	6
1.5 Research Hypotheses	7
1.6 Significance of the Study	8
1.7Assumptions of the Study	9
1.8 Delimitation of the Study	9
CHAPTER TWO: REVIEW OF RELATED LITERATURE	
2.1 Theoretical Framework	11
2.2Conceptual Framework	18
2.2.1 Conceptof Cooperative Method	19
2.2.2 Conceptof Problem-solving Method	23

2.2.3Conceptof Demonstration Method 27

2.2.4 Teaching Methods in the Secondary Schools Education 29

2.2.5 Concept of Performance and Gender 51

2.2.6 Concept of Commerce 55

2.2.7 Review of Empirical Studies 58

2.2.8 Summary of Reviewed Literature 70

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design 71

3.2 Population of the Study 71

3.3 Sample Size and Sampling Procedure 72

3.4 Instrument for Data Collection 73

3.4.1 Validation of the Instrument 74

3.4.2 Pilot Study 74

3.4.3 Reliability of the Instrument 74

3.5 Procedure for Data Collection 75

3.6 Procedure for Data Analysis 76

CHAPTER FOUR: PRESENTATIONAND ANALYSISOF DATA

4.1 Answers to Research Question **77**

4.2Test ofHypotheses 82

4.3Discussion of Major Findings 92

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary 99

5.2 Contribution to Knowledge 102

5.3 Conclusion 103
5.4 Recommendations 104
References 105
Appendices 115

LIST OF APPENDICES

		Pages
Appendix		
A	Introductory letter	115
B	Names of Schoolsin Giwa Zonal Education Office Kaduna State	116
C	Cooperative Method of Teaching Commerce lesson Plan I	117
D	Cooperative Method of Teaching Commerce lesson Plan II	119
E	Cooperative Method of Teaching Commerce lesson Plan III	121
F	Cooperative method of Teaching Commerce lesson Plan IV	123
G	Problem-solving Method of Teaching Commerce lesson Plan I	125
H	Problem-Solving Method of Teaching Commerce lesson Plan II	127
I	Problem-Solving Method of Teaching Commerce lesson Plan III	129
J	Problem-Solving Method of Teaching Commerce lesson Plan IV	130
K	Demonstration Method of Teaching Commerce lesson Plan I	131
L	Demonstration Method of Teaching Commerce lesson Plan II	132
M	Demonstration Method of Teaching Commerce lesson Plan III	133
N	Demonstration Method of Teaching Commercelesson Plan IV	134
O	Post-Test Questions on Cooperative, Problem-Solvingand Demonstration teachingMethod of Teaching in the Senior Secondary Schools Commerce Performance	135
P	Pre-test Question on SS1 Commerce Performance	138
Q	Pretest and Post test scores ofCooperative, Problem-Solvingand DemonstrationTeaching Methods of Teaching in the Senior Secondary Schools-CommercePerformance	142

LIST OF ABBREVIATIONS

The following abbreviations were used in the study

CAIM; Computer-assisted Instruction Method

CAT; Commerce Achievement Test

ERC; Education Resource Centre

LAP; Learning Activity Package

SSCE; Secondary School Certificate Examination

LIST OF FIGURE

		Page
1.		18

LIST OF TABLES

TABLE		Pages
1	Population of the study	72
2	Sample Size	72
3	Cooperative Teaching Method and Performance of Senior Secondary School Students in Commerce in Kaduna state, Nigeria	77
4	Problem Solving Teaching Method and Performance of Senior Secondary School Students in Commerce in Kaduna state, Nigeria	78
5	Demonstration Teaching Method and Performance of Senior Secondary School Students taught Commerce in Kaduna state, Nigeria	78
6	Mean and standard deviation scores of Gender on Performance of Secondary School students' taught Commerce using Cooperative Teaching Method	79
7	Mean and standard deviation scores of Gender on Performance of Secondary School Students 'taught Commerce using Problem Solving Teaching Method	80
8	Mean and standard deviation scores of Gender on Performance of Secondary School Students' taught Commerce using Demonstration Teaching Method	81
9	Mean and standard deviation scores Performance of Secondary Schools Students taught Commerce using Cooperative, problem-Solving and DemonstrationTeaching Methods in Kaduna state, Nigeria	82
10	Regression Analysis on Performance of Secondary School Students 'in Commerce using Cooperative Teaching Method in Kaduna state, Nigeria	83
11	Regression Analysis on Performance of Secondary School Students 'in Commerce using Problem Solving Teaching Method in Kaduna state, Nigeria	84
12	Regression Analysis on Performance of Secondary School Students''in Commerce using Demonstration Teaching Method in Kaduna state, Nigeria	85
13	T-test Difference on Performance between Male and Female Students Taught Commerce using Cooperative Teaching Method in Kaduna state, Nigeria.	86

14 T-test difference on performance between male and female students 'in Commerce using Problem Solving teaching method in Kaduna state, Nigeria- 87

15 T-test Difference on Performance between Male and Female Students 'in Commerce using Demonstration Teaching Method in Kaduna state, Nigeria 88

16 One-way Analysis of Variance on difference between the performances of Students in Cooperative, Problem-Solving and Demonstration Teaching Methods in Kaduna state, Nigeria 89

ABSTRACT

The study was carried out to assess the effectsof cooperative, problem-solving and demonstration teaching methodsonperformance of secondary school students in Commerce in Kaduna State, Nigeria. The study had seven objectives,seven research questions and seven hypotheses. Related literature were reviewed.Quasi-experimental design was used for the study. The population was 6651Senior Secondary school commerce students.A sample ofsixty (60) was used and it was gotten using purposive sampling technique.An instrument, taggedCommerce Achievement Test (CAT), wasused in collecting data for the study. A pilot study was conducted and the reliability coefficient was 0.79. Mean and standard deviation were used to answerall the research questions.Simple regression was used to test hypotheses one to three,while t-test was used to test hypotheses four to six.Hypothesis seven was tested usingANOVAall the hypotheses were tested at 0.05 level of significance. The findings of the studyrevealed that there was significant difference between the Cooperative method of learning Commerce and lecture method which mean that cooperative method have effect on students' performance in commerce. It was revealed in the study that there was significant difference between the Problem-solving method of learning commerceand lecture method which means that problem solving method have effect on the performance of students taught commerce. In comparing the findings of groups one, two and group three it revealed in the study that there is significant different among the experimental group one, experimental group two and group three in the teaching learning of Commerce in the secondary schools in Kaduna State. Based on the findings, it was concluded that students performed better in Cooperative than Problem solving and Demonstration method in the Teaching learning of Commerce in Secondary Schools. Again, the method was found out to be gender friendly as the result from the test of

hypotheses showed no difference existed between the performance of male and female students in the learning ofcommerce at the secondary schools. Based on the findings and conclusion, five recommendations were made, among which includeteachers in senior secondary schools should incorporate cooperative, problem and demonstration methods in their teaching of commerce to improve students' performance. The teachers of commerce in the senior secondary schools of Kaduna Stateshould be encouragedto expose students to the learning of commerce through these methods.

CHAPTER ONE

INTRODUCTION

1.2 Background to the Study

Kaduna State is one of the thirty six states in Nigeria. The state has twenty three local Government Areas, and the following twelve educational zones: Anchau, Birnin-Gwari, Giwa, GodoGodo, Kachia, Kaduna, Kafanchan, Lere, Riga-Chikun, Sabon-Tasha, Zaria and Zonkwa. These educational zones have many secondary schools under their supervision with quite a number of teaching and non-teaching staff. The secondary schools offer a variety of subjects that give the students background to pursue higher education after their completion and success in the Senior School Certificate Examination (SSCE). Commerce as one of the subjects in the senior secondary school (SSS) equips the students with the innovative knowledge and skills towards future endeavour.

Teaching Methods vary in the learning processes. However, with the improvement in and application of technology today, the teaching methods have improved the students' learning process in the secondary schools in Kaduna State. Teaching methods deal with the way or procedure in which information is presented to learners or the refinement process which the teacher uses in or employs to make instruction more effective when using a behavioural method. The teaching methods place emphasis on the role of the teachers and non-teachers alike, in supporting the learners' development and providing support structures to get to that next stage or level. Methods of teaching are applied in the classroom where the teacher uses the chalkboard and other teaching materials and skills such as textbooks, lesson plans, lesson notes, teaching

aids, time, voice management, self-management, class management, and class participation. Classroom communication is important to the teacher in adapting the chosen method to use in the teaching subject and means of assessment of the students' perception on the contents of materials used during the learning process in retaining learning.

In the last decade, there has been a downturn in the performance of students in secondary schools in Kaduna State, particularly in Commerce as a subject. The situation is leading to a drop in their performances in SSCE which includes West African Examination Council (WAEC) and National Examination Council (NECO). The poor performance of students could be attributed to poor teaching methods. Many teaching methods and approaches have been introduced but have not been able to improve on the achievement of male and female students in Commerce. Cooperative demonstration and problem-solving methods are apparent to be more effective teaching methods in teaching Commerce at the secondary schools in Kaduna State. However, the extent of effects of these teaching methods on the performance of the secondary school students in Commerce is yet to be determined. The focus of this study is to systematically track the effects of cooperative, demonstration and problem-solving methods on the performance of secondary school students in commerce in Kaduna State.

Cooperative method of teaching is an organisational structure in which a group of students pursue academic goals through collaborative efforts. Students work together in groups of few people, draw on each other's strengths, and assist each other in completing a task. Cooperative teaching is the instructional use of small teams so that learners work together to take advantage of their own and each other's learning. In cooperative teaching, students are placed in groups of two or six individuals to work on a definite assignment. Cooperative teaching tasks vary widely, ranging from explaining and understanding a new concept to solving a new

problem, analysing a situation, or confronting a dilemma. In a typical task, students might share individual's knowledge with their group or have specific roles to play, and the group would be jointly responsible for arriving at an agreed-upon solution. Demonstration method involves the actual carrying out of a process in a manner that the students will be able to understand the principle. It involves telling of and showing how to do or perform an operation, a process or an experiment. As the teacher performs the operation, students observe and as such, can easily imitate the performance; people have always learnt by conscious imitation.

Problem-solving method is the method that prepares for future or near future challenges by facing real-life, or real-like problems in their learning environment, and finding appropriate solutions to them. Every society expects from its education system a preparation that enables the individuals to become effective. Problem-solving method places emphases on how to learn independently as a student. It is the most convenient approach to achieve the aims of teaching-learning process. The problem-solving method is a based learning that is applicable to almost all areas including Commerce. It enhances the process of choice, the most effective and beneficial tool and behaviour among different potentialities in reaching the goal.

Apart from these three methods, there are many other methods of teaching in secondary school. However, none has been quite predominant in the teaching approach that is therefore considered appropriate and effective in achieving the objective in the learning of Commerce.

Based on the poor performance of students in Commerce, there seems to exist teaching gap. Therefore, there is need to search for effective methods which would be suitable for increasing the level of performance in Commerce in secondary school students of Kaduna State

of Nigeria, and this therefore constitutes the background information on which the study will be conducted.

1.3 Statement of the Problem

Over the years, concern in education has been on effective delivery of instructions at various disciplines in secondary schools across the globe. As in the case of most other subjects, performance in Commerce has been low and it can be linked to poor teaching methods. Many teaching methods and approaches have been introduced but could not improve on the achievement of male, and female students alike, in Commerce. Cooperative demonstration and problem-solving are projected to be effective teaching methods that will be applied in Commerce teaching at the secondary schools in Kaduna State. In the 2013 WAEC and NECO examinations, the statistics from the Kaduna State Ministry of Education revealed that, out of the six thousand seven hundred and ninety five (6,795) students who sat for Commerce in May/June WAEC examinations, only 5% scored "A", 7% scored "B", 8% scored "C", 11% scored "D", 18% scored "E" and 51% scored "F". And in June/July NECO examinations of the same year, 8% scored "A", 6% scored "B", 9% scored "C", 14% scored "D", 16% scored "E" and 47% scored "F".

Prominent among the factors which have been identified as contributing to the low level of performance in Commerce is poor methods of teaching adopted by the teachers (Osokoya, 2011). The frequent uses of same texts and methodology in the learner variables such as gender and home background, lack of organised methods for concept formation, teacher characteristics and memory skills in the teaching process can be the causes of discouragement in learning attitude. It has therefore become apparent that, the lecture teaching method that is currently predominant in secondary schools is inappropriate and very ineffective for achieving the goal of

Commerce as a programme. Consequently, there is need to search for more effective methods which would be more suitable and efficient for promoting the students' performance in Commerce in the secondary schools beyond the present position and to actualize the current need on Commerce in the new curriculum requirements (Michael, 2012).

There is no single method that can be regarded as best for every teaching situation. Ada (2005) suggests that there are numbers of criteria available that may guide the teacher in the choice of any given method of teaching which include the contents to be taught, objectives to be achieved, time available, number of students, teachers' preferences and individual differences, the type of lesson, facilities available and, needs and interest of the class. Excellent teaching is the result of exposing students to certain experience through adequate guidance and providing appropriate learning activities so that they acquire the best form of learning. In spite of the efforts made by teachers and learners, we discover that often, learning still falls short of the desired expectations. This deplorable situation urgently requires Commercial teachers and curriculum planners to pay attention so as to curb the problem quickly before too much effort and time are wasted (Owolabi, 2008).

These methods (cooperative, demonstration and problem-solving) could be better alternative in the teaching of Commerce than other methods such as discussion, project and assignment. However, no evidence is available to the researcher about the effectiveness of any methodology in teaching Commerce as a subject in the secondary schools in Kaduna State.

Based on this, the researcher is therefore interested in finding their relative effectiveness as methods that could be adopted for teaching Commerce for better performance of secondary school students. In other words, the concern of the researcher is to establish the effectiveness of

cooperative, demonstration and problem-solving methods on performance of Commerce as a subject in the secondary schools in Kaduna State of Nigeria.

1.4 Objectives of the Study

The major objective of this study is to determine the effects of cooperative, demonstration and problem-solving methods on the performance of secondary school students in Commerce in Kaduna State. The specific objectives are to:

1. determine the effect of Cooperative teaching method on the performance of Secondary School Students in Commerce in Kaduna State, Nigeria.
2. determinethe effect of Problem-solving teaching method on the performance of Secondary School Studentsin Commerce in Kaduna State, Nigeria.
3. determine the effect of Demonstrationteaching method on the performance of Secondary School Students in Commerce in Kaduna State, Nigeria.
4. Establish the differencein performance between Male and Female secondary School Students taught Commerce usingCooperativeteaching method in Kaduna State, Nigeria.
5. establish the differencein performance between Male and Female secondary School Students taught Commerce using Problem-solving teachingmethod in Kaduna State, Nigeria.
6. establish the differencein performance between Male and Female Secondary School Students taught Commerce using Demonstration teaching method in Kaduna State, Nigeria.
7. establish the comparative effects of Cooperative, Demonstration and Problem-solving teaching method on the performance of Secondary School StudentstaughtCommerce in Kaduna State, Nigeria.

1.5 Research Questions

The following research questions are formulated to guide the study:

1. What is the effect of Cooperative Teachingmethod on the performance of Secondary School Students in Commerce in Kaduna State, Nigeria?
2. What is the effect of Problem-solvingTeachingmethod on the performance of Secondary School Students in Commerce in Kaduna State, Nigeria?
3. What is the effect of Demonstration Teachingmethod on the performance of Secondary School Students inCommerce in Kaduna State, Nigeria?
4. What is the difference in the performance ofMale and FemaleSecondary School StudentstaughtCommerce using Cooperative Teachingmethod in Kaduna State, Nigeria?
5. What is the difference in the performance ofMale and Femalesecondary School StudentstaughtCommerce using Problem-solvingTeaching method in Kaduna State, Nigeria?
6. What is the difference in the performance ofMale and Femalesecondary school students taughtCommerce using Demonstration Teachingmethod in Kaduna State, Nigeria?
7. What are the comparative effects of Cooperative, Demonstration and Problem-solving teaching methods on the performance of secondary studentstaught Commerce in Kaduna State, Nigeria?

1.6 Research Hypotheses

The following research hypotheses were formulated in order to further probe the research questions of the study:

1. Cooperativeteaching method has no significant effect on the performance of secondary School Students inCommerce in Kaduna State, Nigeria.

2. Problem-solvingteachingmethod has no significant effect on the performance of Secondary School students in Commerce in Kaduna State, Nigeria
3. Demonstration teachingmethod has no significant effect on the performance of secondary School Students in Commerce in Kaduna State, Nigeria
4. There is no significant difference between the performance ofMale and Femalesecondary school students taughtCommerce using Cooperative Teachingmethod in Kaduna State, Nigeria.
5. There is no significant difference between the performance ofMale and Femalesecondary school students taught Commerce using Problem-solvingTeaching method in Kaduna State, Nigeria.
6. There is no significantdifference between the performance ofMale and Femalesecondary school studentstaught Commerce using Demonstration Teachingmethod in Kaduna State, Nigeria
7. There is no significant difference between the effects of Cooperative, Demonstration, and Problem-solvingteachingmethods on the performance of secondary school studentstaught Commerce in Kaduna State, Nigeria.

2.6 Significance of the Study

The findings of the study wereexpected to be of benefit to Students,Teachers of Commerce, Schools Inspectorate Units of Federal and State Ministries of Education,communities and researchers..

Students will be able to acquire more knowledge in the learning of Commerce concepts.For the teachers of Commerce, this is by using the types of methodology that will play important role in the teaching-learning process because the teachers of commerce stand a better

chance of reaping from the result of this study, as the study suggests methodology that will assist them in selecting the appropriate teaching method that can enhance students' performance. The findings of this study will contribute to the body of existing knowledge with regards to the lecture teaching and demonstration methods which enhances students' performance in Commerce in the secondary schools in Kaduna State of Nigeria.

This study will help the schools inspectorate units of the Federal and the State ministries of education in achieving the objectives set by the ministries for students of Commerce. This is because students' performance will be enhanced and the skills as stated in the National Policy of Education will be achieved. Equally, curriculum planners can benefit tremendously from the findings of this study because, it will serve as an eye-opener in helping them to suggest relevant teaching methods for teaching different topics in the curriculum contents. In addition, the government has a lot to benefits to derive from the findings of this study, through successful implementation of strategy policies in the secondary school system.

The communities will also gain from the findings of this study in order to encourage youths in the learning of Commerce as a vocational subject taught in the secondary schools which foster skills development in the community.Finally the study will serve as a referral document for further research on other subjects in the secondary school for better teaching and learning

2.7 Assumptions of the Study

The basic assumptions of this study are that:

1. The Students are intelligent enough to study Commerce at the Secondary Schools level...

2. All other variables, such as Parental, andPeer influences, school environment were assumed to have the same influence on students' performance in Commerce Kaduna State.

2.8 Delimitation of the Study

The study is delimited to public Secondary Schools that offer Commerce in Kaduna State of Nigeria. Only senior Secondary Schools in Giwa Educational zone was used and senior secondary yearone (SS1) was used and those schools that have candidates for Senior School Certificate Examination (SSCE). It was delimited to the use of three teaching methods namely; Cooperative, Problem-solving and Demonstration in Teaching Commerce. This is because, they are the methods that the researcher chose for the study. Only students in SSS I class was used in the study because they have experience in the learning of Commerce for one year and were not too busy like the SSS III students that are preparing for their final exams. The topic chosen for the study was Production. This is because, it was one of the topics in the curriculum for the SSS I in their scheme of work for second term. It was based on this that these methods of teaching commerce in the secondary schools were used

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter looks at books, journals, magazines and online materials in reviewing relevant works. The chapter is organised under the following sub-headings:

2.1 Theoretical Framework

2.2 Conceptual framework

2.3 Concept of Cooperative Method

2.4 Concept of Problem-Solving Method

2.5 Concept of Demonstration Method

2.6 Concept of Performance

2.7 Concept of Commerce

2.8 Empirical Studies

2.9 Summary of Reviewed Literature

2.1 Theoretical Framework

This study was based on Theory of Skinner (1948).The theory was on operant conditioning behaviorism that focuses on changes in an individual's observable behaviours which is called classical conditioning of learning. It viewedlearning by expanding leaners' understanding.This was achieved through act of conditioning in the learning behaviour of an

individual. A behavior is followed by reinforcement on an individual. Thebehaviour is more likely to be repeated, but if it is followed by punishment, it is less likely to be repeated. In operant conditioning, new or continued behaviours are impacted by new or continued consequences.Operant conditioning is described as a process that attempts to modify behaviour through the use of positive and negative reinforcement. Through operant conditioning, an individual makes an association between a particular behaviour and a consequencelearning by doing, learning by forming mental images and learning through a series of abstract symbols or representations. This theory is necessary because, Commerce has to do with learning by doing, learning by forming mental images and learning through series of abstract symbols or representations. Skinner in his contribution (1951) on the theory of behaviour shaping through successive approximation. Skinner argues that the principles of operant conditioning can be used to produce extremely complex behaviour if rewards and punishments are delivered in such a way as to encourage move an organism closer and closer to the desired behaviour each time. In order to do this, the conditions (or contingencies) required to receive the reward should shift each time the organism moves a step closer to the desired behaviour.

Positive reinforcers are favorable events or outcomes that are given to the individual after the desired behavior. This may come in the form of praise, rewards, etc. Negative reinforces typically are characterized by the removal of an undesired or unpleasant outcome after the desired behaviour. A response is strengthened as something considered negative is removed. The goal in both of these cases of reinforcement is for the behaviour to increase. Skinner showed how positive reinforcement worked by placing a hungry rat in his Skinner box. The box contained a lever on the side and as the rat moved about the box it would accidentally knock the lever. Immediately it did so a food pellet would drop into a container next to the lever. The rats quickly

learned to go straight to the lever after a few times of being put in the box. The consequence of receiving food if they pressed the lever ensured that they would repeat the action again and again.Positive reinforcement strengthens a behavior by providing a consequence an individual finds rewarding. For example, if your teacher gives you £5 each time you complete your homework (i.e. a reward) you will be more likely to repeat this behavior in the future, thus strengthening the behavior of completing your homework.

Punishment, in contrast, it is when the increase of something undesirable attempts to cause a decrease in the behavior that follows.Positive punishment is when unfavorable events or outcomes are given in order to weaken the response that follows.Negative punishment is characterized by when a favorable event or outcome is removed after an undesired behavior occurs.The goal in both of these cases of punishment is for a behavior to decrease.As children develop, less emphasis is placed on doing and more are placed on the abstract. This theory is relevant to this study as it approaches it from the point of view of learning by doing, formation of images to retain learning, from unknown to known.Skinner theoryfocussed on change in learning outcome of an individual. They claim that, selecting Concept Curriculum is the primary source of new concepts. Concepts lessons should be taught with material contents, new rules include new vocabulary, words planning for concept teaching, and plan time.The removal of an unpleasant reinforcer can also strengthen behavior. This is known as negative reinforcement because it is the removal of an adverse stimulus which is ‘rewarding’ to the animal or person. Negative reinforcement strengthens behavior because it stops or removes an unpleasant experience. For example, if you do not complete your homework, you give your teacher £5. You will complete your homework to avoid paying £5, thus strengthening the behavior of completing your homework.Skinner showed how negative reinforcement worked by placing a rat in his

Skinner box and then subjecting it to an unpleasant electric current which caused it some discomfort. As the rat moved about the box it would accidentally knock the lever. Immediately it did so the electric current would be switched off. The rats quickly learnt to go straight to the lever after a few times of being put in the box. The consequence of escaping the electric current ensured that they would repeat the action again and again.Skinner even taught the rats to avoid the electric current by turning on a light just before the electric current came on. The rats soon learn to press the lever when the light came on because they knew that this would stop the electric current being switched on.

The Theory claims concept lessons should clarify aims and clearly communicate the aims of the lesson and establish set objectives on how the teacher follows over the steps of the lesson.The theory based that in implementing concepts lessons should encourage inputs.Examples, the theory places emphases on two types of presentation which include, Direct Presentation which involves names the concept and provides definition, identifies critical attributes and gives examples/non-examples, test for understanding by having students provide examples/non-examples that fit two types of presentation, concept attainment (students must have some prior knowledge of concept). Give examples labeled “Yes” and non-examples labeled “No”. Have students hypothesise about attributes and record ideas. Have students name the concept and describe process used in identification. Check for understanding by having students identify examples as “Yes” or “No” and have them explain why. The theory recommends that the teacher only gives concept definition after students have been engaged in the discovery of critical attributes.

Skinner’s theory is on the basis of implementing concept lessons and analyse students, get the students to think about their own thinking/learning, ask students to examine their

decisions and the process consequences. It helps students to integrate new learning by relating their choices concepts to other concepts in the unit of study. The theory encourages strategies of evaluating students understanding with words, ask the students to use the concept in new learning process of a person, and on the need for teachers to facilitate the processes which would lead to the self-actualisation of pupils. Humanistic psychology in educational terms calls for a quality of teaching which will allow pupils to make conscious choices in an environment characterised by freedom. The teacher will act as a 'facilitator', relating to his pupils in a manner based on empathic understanding a sensitive awareness of how the pupil perceives his environment.Skinner's fashion the idea of 'experimental learning' which gives to education a humanistic orientation, leading to true freedom and self-fulfillment. Skinnercall for a pupil-centred education based on active discovery, in contrast to the essentially passive, conformist, accumulation of stored knowledge. Skinner places emphasis on feeling and thinking, on the recognition and importance of student's personal values; on interpersonal communication, and on the development of sensitive self-concepts. For him, learning to learn, active involvement in a process of change, should be the primary aims of an education based on experimental learning. Rogers sees the teacher, not as a controller or director, but as a facilitator. Based on this, the theory stipulates some general principles of learning in commerce, people learn well when they are ready to learn. This means that, people who have a definite reason for learning or who see the utility of what is being taught are more apt to be receptive to learning. The implication to a school teacher is that, teaching requires more than just presenting facts or information. Students or pupils must be helped to see utility and relevance in the secondary school teaching skills of the learning. When they do, they will be more apt to take active role in the learning process.

People learn more easily when their learning can be built on or related to something they already know. Thus, when planning instruction, relate the new to the old, start with something that is familiar to the pupils and build up with the new information or skills. People must learn step-by-step; instruction must be logically organised and must move from the concrete to the abstract or from the known to the unknown. Pupils learn best when they know where they have been, where they are now, where they are going, and how they will get there. People learn by doing; telling alone is not teaching. You can tell pupil how to do something, and then show them how to do it, but, until they have actually tried to do it themselves, no real learning has taken place.The more often people use what they have learnt, the better they will be able to understand or perform it. This means that constant reinforcement of learning through practical application activities is a must if learning is to take place. When a pupil experiences success in learning, it stimulates additional learning. It means, presenting instruction to pupils in small enough doses that they are able to succeed. With time, experience and growth, their doses can be increased. The key is to give them doses that are large enough to be challenging, but small enough to allow for success. Pupils need immediate feedback to know whether or not they have actually learnt. This principle requires teachers to evaluate pupils' learning frequently and provide pupils with information about the result promptly. Skinner suggests the following principles of teaching-learning process.Learning needs to be made accessible and usable, that is, learning needs to be structured in student's minds. Structuring involves matching it to what learners know already and helping them to classify the knowledge into categories so that it is easy to recall. Students learn from the words of others when they can match the words with their own experiences. Reward and praise are more effective than blame and punishment. In another contribution, Skinner

suggests that if people's natural capacity to learn has been impaired, it looks as if they learn best when:

(a) They find that there is something which they wish to learn;

(b) They are able to tackle this task reasonably directly;

(c) The task offers intrinsic rewards;

(d) The task is sensible and manageable;

(e) They can formulate hunches, test them and see the result of their action;

(f) They are able to see patterns; and

(g) They find themselves in a challenging but friendly and supportive environment

2.2 Conceptual Framework

The conceptual framework to which this study based is the emerging teacher leader's conceptual framework principles by theDepartment of Education (2015) Wake Forest University,Winston Salein.



Figure 1

Thefigure was designed to represent the guiding principles, each a strong commitment to enhance the performance of teacher candidates on Cooperative, Problem-solving and Demonstration teaching methods.Reflection is at the heart of performance and the six other principles mediate reflection and performance. Caring is at the top of the principles because without caring, there cannot be reflection that focuses on the needs of students nor can performance be truly effective. Content is at the base of the Conceptual Framework to represent the need for a solid foundation in content knowledge to ensure high quality performance. The four remaining principles are equally important to teachingand learning that resounds for all students in the classroom.Content– Teachers have a broad knowledge, know the content appropriate to their specialty, understand the ways their teaching area connects to the broad curriculum, and know relevant applications of the content they teach.Pedagogy – Teachers know the ways learning takes place and use a variety of methods to teach and assess learning. They are expert communicators, have strong technology skills, plan instruction that is appropriate, use a variety of tools, teach critical thinking and problem solving skills, help students develop skills of teamwork, leadership, and cooperation, and instill a love of learning.Diversity – Teachers demonstrate their belief that diversity in all its forms is a strength. They prepare students to be globally competent and culturally aware, know and respect the influence of diversity on a child's development, adapt their teaching to students with special needs, and work collaboratively with the families of

their students.Leadership – Teachers lead in their classrooms and school, advocate for schools and children, function effectively in a complex community environment, meet high ethical standards of practice, and advocate for the teaching profession.Reflection – Teachers analyze their teaching, collaborate with colleagues, use and conduct research to inform their practice, and continue to grow professionally.Caring – Teachers enjoy spending time in the company of children and young adults, learn about each of their students, maintain the dignity of each student, and express pride in their students' accomplishments.Technology – Teachers recognize that their students must possess the knowledge and skills to function in a 21st Century environment. Accordingly, they use technology effectively and appropriately to enhance instruction, assessment, productivity, and communication with school and professional communities.

2.2.1 Cooperative Method

According to Dynamic Flight (1999), cooperative or group learning is an instructional strategy which organises students into small groups so that they can work together to maximise their own and each other's learning. Numerous research studies in diverse school settings, and across a wide range of subject areas, indicate promising possibilities for academic achievement with this strategy. For example, advocates have noted that students completing cooperative learning group tasks tend to have higher test scores, higher self-esteem, improved social skills, and greater comprehension of the subjects they are studying. Numerous other benefits for students have been attributed to these programmes. Perhaps the most significant characteristic of

group learning is that it continually requires active participation of the student in the learning process.

23Dynamic Flight (1999) identifies that, in spite of its many advantages, cooperative or group learning is not a panacea for education or training. Virtually all studies and literature carefully mention that success depends on conditions that must be met and certain controls that must be in place. First of all, instructors need to begin planning early to determine what the student group is expected to learn and be able to do on their own, The end result of a curriculum unit or group task may emphasise academic achievement, cognitive abilities, or physical skills, but the instructor must describe, in very unambiguous language, the specific knowledge and/or abilities the students are to acquire and then demonstrate on their own. In addition to clear and specific learning outcomes or objectives, some of the other conditions and controls that may apply are discussed below.Dynamic Flight (2003) identifies that instructors should organise small groups of approximately 3 to 6 members so that students are mixed heterogeneously, considering academic abilities, ethnic backgrounds, race, and gender. Students should not be allowed to form their own groups based on friendship or cliques. The main advantages of heterogeneous groups are that students tend to interact and achieve in ways and at levels that are rarely found with other instructional strategies. They also tend to become tolerant of diverse viewpoints, to consider the thoughts and feelings of others, and to seek more support and clarification on various opinions.

Instructors need to provide directions and instructions that contain, in clear and precise terms, exactly what students are to do, in what order, with what materials, and when appropriate, what students are to generate as evidence of their mastery of targeted content and skills. These directions need to be given to the students before they engage in their group learning efforts.

Students must perceive these objectives as their own. They must understand and believe that everyone in the group needs to master the essential information and/or skills. In cases where groups select their own objectives, all members of the group must accept the objectives as ones they have agreed to achieve.

Dynamic Flight (2003) states that instructors must structure the learning tasks so that students would believe that they sink or swim together. Thus, access to rewards is through membership in the group where all members receive a reward or no member does. This means that tasks are structured so that students must depend upon one another for their group's success in completing and mastering the targeted objectives. Every student must believe that he or she has an equal chance of learning the content and/or abilities, and earning the group rewards for success, regardless of the group he or she belongs. In other words, the student must not feel penalised by being placed in a particular group. In a suggestion, Dynamic Flight (2003) says that instructors must structure the tasks so that students have access to and comprehend the specific information that they must learn. The focus of learning tasks must be aligned with the specific objectives, as well as any test items that will be used to measure their achievement. Each student and group should be provided the amount of time needed to learn the targeted information and/or abilities. If students do not spend sufficient time learning, the benefits will be limited. Research suggests that many of the positive values, social skills, and academic advantages of cooperative learning tend to emerge and be retained only after students have spent several weeks together in the same heterogeneous group.Students should be positioned and postured to face each other for direct eye-to-eye contact and face-to-face conversations. Just because students are placed in groups and expected to use appropriate social and group skills do not mean they will automatically use these skills. To work together as a group, students need to engage in such

interactive abilities as leadership, trust-building, conflict management, constructive criticism, encouragement, compromise, negotiation, and clarification. Instructors may need to describe the expected social interaction behaviours and attitudes of students, and to assign particular students with specific roles to ensure that they consciously work on these behaviours in their groups (Dynamic Flight, 2007).

The main reason that students are put in cooperative learning groups is to enable them, as individuals, achieve greater success than if they were to study alone. Thus, each student must be held individually responsible and accountable for doing his or her own share of the work and for learning what needs to be learnt. As a result, each student must be formally and individually tested to determine mastery and retention of the targeted learning outcomes or training objectives. Only members of groups who meet established levels for achievement receive the rewards or public recognition. The specific awards must be something valued by the students. Students should spend time after the group tasks have been completed, to systematically reflect upon how they worked together as a team – specifically how well they achieved their group objectives; how they helped each other comprehend the content, resources, and task procedures; how they used positive behaviours and attitudes to enable each individual and the entire group to be successful; and what they need to do in the future to be even more successful (Dynamic Flight 2007). All of the preceding conditions and controls do not have to be used every time an instructor assigns students to work in groups.In practice, cooperative or group learning in aviation training is normally modified to adapt to school policy or for other valid reasons. For example, collaborative, student-led, instructor-led, or working group strategies are alternatives to a pure form of group learning. In these examples, the student leader or the instructor serves as a coach or facilitates who interacts with the group, as necessary, to keep it on track or to encourage

everyone in the group to participate (Dynamic Flight, 2007).However, Cooperative teaching method and performance of secondary school students on research work has not been carried out on teaching subject other than Commerce.

2.2.2 Problem-Solving Method

In sorting out the concept of problem-solving method, Audu, (1996).stated that, problem-solving is how to learn independently; the most convenient approach to achieve the aims of teaching. Each society expects from its education system that it enables the individuals to become effective problem solver in their real life (Walker & Lofton, 2003; Chin & Chia, 2004). The roots of problem-solving learning are found in Dewy's (1938) thoughts that, "learning by experimentation or doing is more lasting". Actually, the learning process, according to Rhem (1998) and Herrid (2003), is that, in present era, problem-based learning is extensively used nearly in all areas. Yager (2000) has stated that we live in a dynamic society in which social, political and technological conditions are changing continuously. Therefore, educators should analyse and evaluate the trends in order to decide an appropriate curricula and methods of instruction which will make students ready for real life situation.

Today, it is recognised that everybody must be empowered to suggest possible explanations, to propose ways to test personal or class, to collect and interpret data obtained, and to communicate the process and results to others. In this era of unprecedented breakthroughs in technology and constant change in many aspects of life, educators are challenged more than ever before with the need to develop students who will be adaptable in fast-changing environments. This calls for equipping students with better thinking skills and learning abilities. Concomitant with the quest for the development of skills pertaining to creativity and enterprise is the call for a

paradigm shift in education (Seng, 2001). Akrani (2011)states that, commerce generates employment opportunities. The growth of commerce, industry and trade bring about the growth of agencies of trade such as banking, transport, warehousing, advertising, etc. These agencies need people to look after their functioning. Increase in production results in increasing demand, which further results in boosting employment opportunities. Thus, development of commerce generates more and more employment opportunities for millions of people in a country.Problem-based learning is a model which centres on students, develops active and motivated learning, problem-solving skills and broad field knowledge, and based on the deep understanding and problem-solving (Walker & Lofton, 2003). In those classrooms in which problem-based learning method is used for instructional process, the students take much more responsibility of their own learning. They have become independent and long life learners, and can continue to learn in their whole life.

In the problem-based learning model, the students turn from passive listeners of information receivers to active, free self-learners and problem solvers. It also shifts the emphasis of educational programmes from teaching to learning. It enables the students to learn new knowledge by facing the problems to be solved instead of feeling boredom. Problem-based learning affects positively, certain other attributes such as problem-solving, information acquisition, and information sharing with others, group works, and communication etc. Again, problem-solving is a deliberate and serious act, involves the use of some novel method, higher thinking and systematic planned steps for the acquisition set goals. The basic and foremost aim of this learning model is acquisition of such information which based on facts (Yuzhi, 2003 and Mangle, 2008).

According to Gallagher (1999), in problem-based learning environment, students act as professionals and are confronted with problems that require clearly defining and well-structured problems, developing hypothesis, assessing, analysing, utilising data from different sources, revising initial hypothesis as the data collected, developing and justifying solutions based on evidence and reasoning. The practice of problem-based learning is richly diverse, as educators around the world and in a wide range of disciplined, have discovered it as a route to innovating education. The educators use problem-solving method as an educational tool to enhance learning as a relevant and practical experience, to have students' problem-solving skills and to promote students' independent learning skill. Eng (2001) claims that, problem-based learning is a philosophy aim to design and deliver a total learning environment that is holistic to student-centred and student empowerment.

Presenting the students with a problem gives them opportunity to take risks, to adopt new understandings, to apply knowledge, to work in context and to enjoy the thrill of being discoverers. Tick (2007) states that, in the student-centred learning environment that is desirable for problem-based learning, the central figure of the learning-teaching process is the student. The learning objective is not the reproduction, recall and learning of passively received learning material but the active and creative engagement of students in group work and in individual study, thus, transferring the skills and knowledge. The individual, autonomous self-directed learning, gives the freedom to the learner to decide individually and consciously on the learning strategy and on the time scale, he/she wants to follow.

The most important achievement of a teacher is to help his/her students along the road to independent learning. In problem-based learning, teacher acts just as facilitator, rather than a

primary source of information or dispenser of knowledge. Roh (2003) argues that, within problem-based learning environments, teachers' instructional abilities are more critical than in the traditional teacher-centred classrooms. Beyond presenting commercial knowledge to the students, teachers in problem-based learning environments must engage students in marshalling information and using their knowledge in sorting out issues in the real life. Evidence of poor performance in Commerce by elementary school students highlights the facts that the most desired technological, scientific and business application for Commerce cannot be sustained. This makes it paramount to seek for a strategy for teaching Commerce that aims at improving its understanding and performances by students practically (Okigbo and Osuafor, 2008). Problem-solving as a method of teaching may be used to accomplish the instructional roles of learning basic facts, concepts, and procedure, as well as goals for problem-solving. Problem-solving as a major part of Commerce has many applications and often, those applications represent important problems in Commerce. We include problem-solving in school Commerce because, it can stimulate the interest and enthusiasm of the students (Wilson, 1993). However, problem-solving teaching method and performance of secondary school students on research work has not been carried out on teaching subject other than Commerce.

2.2.3 Demonstration Method

Makama (2008) identifies demonstration as a method of instruction that involves the actual carrying out of a process in a manner that students will be able to understand the principle or phenomenon being taught. It involves showing and telling of how to do/perform an operation, process or experiment. As the teacher performs the operation, students observe and as such can easily imitate the performance. People have always learnt by conscious imitation. It is probably the teacher's greatest aid in training students in fundamental skills and practice in the shortest possible time.

Demonstration procedure as stated in Makama (2008), establishes instructional needs, develops instructional objective, plans for the demonstration, prepares the student, prepares the environment, pre-presentation consideration, presents the demonstration, follows up activities, evaluates the demonstration, and modifies the demonstration for the future.Searching for the role of the teacher in the demonstration method, Makama (2008) postulates that the teacher performs the skills to be learnt, interprets the material or activity being demonstrated, sets the standard of the performance, challenges students through questions, assists students to perform the activity and communicates ideas, principles and facts. The teacher equally organises information, sequence of operation or materials for presentation, observes students' reaction, problems, concerns and needs during the presentation, encourages students and evaluates students' performance.

In the same direction towards getting the student's role in the demonstration method, Makama (2008) asserts that students observe the demonstration, help in putting on the demonstration, co-demonstrate with the teacher, challenge information presented, organise fact,

perceptions, proceeding presented, assimilate facts, procedure or process presented. In stating out the advantages of this method, Makama (2005) makes it clear that the method is very effective in skill development because, it is based on established principles of learning. As a good method of teaching, demonstration satisfies students' needs or interest, uses various senses of seeing, hearing, touching, and as such attracts attention, uses variety of teaching and communication processes, provides a sound basis for students to apply what they have learnt, saves time and effort, gives uniform instruction, reduces verbal discussion, applies to a wide range of subject matter, and applies to any age level when the content is capable of being understood. Sitting arrangement should be such that participants face each other, the leader should face the participants.

Looking at the process of using the method, Makama (2005) stipulates that the method has three phases such as pre-discussion phase; establishes goals and plans the agenda; and prepares the participants.

1. Pre-discussion phase makes the physical arrangement, sets time and place, establishes the ground and rules, and secures the necessary information.

2. Discussion phase clarifies and presents the topic, explains the purpose, communicates the ground rules, presents the issue to be discussed, participates in the discussion, clarifies challenges, raises questions, involves as many as possible, regulates the discussion, records important points and stimulates the discussion.

3. Third phase summarises the points or issues raised, draws conclusion, assesses the attainment of the goals, establishes follow-up activities, prepares a written statement regarding the points covered, conclusion and goals attained (Makama, 2005).However,

Demonstration teaching method and performance of secondary school students on research work has not been carried out on teaching subject other than Commerce.

2.2.4Teaching Methods in the Secondary Schools Education

Lecture Method:Pointing out the framework of this method and its relevance in the learning process, Makama (2005) identifies that the method may be seen as one of the oldest and the most popular and extensively in use today in our colleges. It involves unorganised verbal presentation of a body of content centred on a behavioural topic. It uses oral form of communication and usually to the entire class. When the method is properly used, it can assist in introducing activities for motivating students, for summarising at the end of the unit and for explaining difficult points. It can be useful in bridging gaps between topics to be studied in depth and for presenting information.

Being a one-way medium and a teacher-centred, it is primarily a method for cognitive learning and factual transmission. Makama (2005) states that lecture method is satisfactory in attaining the objective of teaching knowledge and transferring information but when the objective is to develop concepts and problem-solving skills, other methods are preferable. Establish instructional needs develop instructional purpose plan for the lecture, presentation of the lecture, follow-up on the lecture, and projection of the lecture.Focusing on the role of the teacher, Makama (2008) claims that, it stimulates students' thoughts concerning the content of the lecture, challenges the thinking and ideas of the students, arouse the interest and involvement of the students, observes students behaviour for the purpose of channeling the lecture into productive areas, evaluate student’s reaction to see if the message is getting through.

In sorting out the role of lecturer and students in the lecture method, Makama (2008) states that, it is a challenge that the substance of the lecture relates to his needs, organises the

lecture information into a framework for application, evaluates the content of the lecture to his students where students are only to take down notes, and listen well to the lecturer points where necessary. In highlighting the advantages of the method, Makama (2008) identifies that it can be used on any size of class, can be used in handling the variety of subject matter, can be easily recorded or reproduced in a variety of ways, is applicable in the cognitive and effective domain, is less expensive, does not require any additional physical arrangement, is flexible, is generally known or familiar to students.The Role of Teaching:Osokoya (1996), defined teaching as the systematic series of activities through which the teacher seeks to interpret his behavioural task in relation to modification of the learner's state of knowledge. No doubt, teaching is the action of a person to make learning possible; facilitating learning is the purpose of teaching. Successful teaching must satisfy the following conditions: It must be methodical. It must be well planned. It must result from resourcefulness on the part of the teacher. It must be activity-based. It must be related to the learner's experience. Furthermore, he/she should have a clear mental picture of the exact changes he or she wants to bring about in the learner.Osokoya (1996) further suggests that there are very many methods of teaching from which the teacher could select. It is important to note that, no single method would suit all occasions in teaching any subject. However, whatever method the teacher adopts, he/she must ensure that what is taught is associated with the pupil's imaginative experience. In addition, the topic must be within the understanding of the pupils.

In planning the teaching, Osokoya (1996) states that it goes beyond merely preparing lesson notes. Planning entails detailed study of the curriculum as well as the syllabus which must be well constructed to meet the demands of the society. There must also be a break-down of the contents to be covered into instructional units. The instructional units would be broken into individual lesson plan having the following major or sections: (a) A clear statement of objectives

which must be defined in behavioural terms. (b) The different procedures of the lesson. (c) The learners' and teachers' activities. (d) Appropriate materials to be utilized. (e) The teaching process. (f) Evaluation procedures. (g) The estimate of time to be spent on each phase of the lesson (Osokoya, 1996).

John (1996) says that, it is through planning that the teacher can determine the scope and sequence of units, topics and lessons; identify and use basic resources for enriching students' understanding of the subject; and finally, set objectives appropriate to the content, students' growth and the different levels of understanding. Planning usually results in better teaching. Resourcefulness in this context, according John (1996) refers to the ability of the teacher to create resources for his teaching. If such resources are not provided or available, teachers blame government for the resulting lapses and ineffective teaching. In order to become a truly resourceful teacher, one should be able to improvise and make effective use of old resources. The use of resources therefore cannot be overemphasised in effective teaching. Throughout life, before school, in school, after school, a great majority of people learn from what they see apart from what they read or hear. No doubt, few things would help make teaching livelier than the judicious use of the visual approach. One of these is the activity-based approach.

Activity-based teaching in line with Kowoser and Berman (2014) states that, educationists have discovered that children learn best when they themselves are actively involved in the teaching-learning process. For a successful teaching, every learner must be actively involved in the process of learning. It must be realised that whatever a child does himself, however rough or imperfect, is more important than the neat and perfect one done by the teacher for him in the learning process. Teaching demands participation. The teacher encourages the learners to question and comment so that their understanding may be tested and newly

acquired skills practiced. For learner's experience, a good teacher tries to exploit the learner's experience in the teaching-learning process. In doing this, the teacher regards every learner as potentially having some form of experience upon which he works from to build. Good teaching does not assume that a learner, whatever need, age, background or experience, is totally ignorant of what is being taught (Osokoya, 1996). Learning to teach involves a range of practical skills, and a substitute of when and how to apply them (Claxton, 1990). Kyiracou (2010) identifies that, as an instructional expert, the teacher is responsible for planning, guiding and the evaluation of learning programmes. In this wise, the teacher serves as the director of learning, planning interesting and meaningful learning experiences for students, using a variety of instructional materials and procedures, providing for individual differences and monitoring, recording and reporting student's growth and achievement. As an instructional expert, the teacher is in effect, a navigator for learning by serving as a guide, consultant and resource person to pupils.

In making decision as to what to teach, what teaching materials to use, the method to adopt for teaching as well as evaluating the intended learning, Claxton (1990) states that the teacher would depend on such factors as the objectives of the school curriculum, his or her knowledge of learning theory and motivation, the abilities aid need of students as well as the teacher's own personality aid needs. He further clarifies that, as an instructional expert, the teacher should be the managers in the classroom environment; the teacher could be referred to as the environmental manager who organises the classroom space to maximise learning. He takes actions and decisions necessary for the maintenance of law and order in the classroom environment. He is responsible for laying down rules and procedures for learning activities. The teacher's expertise of classroom management no doubt could either help or hinder pupils' learning. His classroom management expertise would include modeling a positive attitude

towards schooling, the curriculum as well as learning in general. A teacher who shows a caring attitude towards learning and the learning environment would invariably instill and reinforce similar attitude in the pupils (Kyiracou, 2010).

Blair, Schwartz, Biswas and Leelawong (2007) recognise that the third responsibility of the teacher is that of a counsellor, where it is stated that an effective teacher should be a sensitive observer of human behaviour. The teacher gets to know each pupil as an individual who has a distinct nature characterised by certain needs, interests, strengths, weaknesses and ways of communicating. Central to being able to perform this role successfully is the teacher's maturity, patience, and deep interest in each pupil's welfare. Therefore, a key indication of how well the role of the teacher as a counsellor is being performed is the extent to which the teacher is familiar with the characteristics and needs of each pupil.

The constituent behaviours of the teacher as a counselor are getting to know his pupils and demonstrating exemplary values and good personal character. The teacher must be prepared to respond constructively when behaviour problems get in the way of pupils learning and development. The teacher should carefully observe pupils, realising that he is teaching pupils that are individuals who have unique strengths and weaknesses, needs and problems. He should also be able to demonstrate, exemplify values and have personal character including handling situations with fairness, honesty, patience, caring for pupils' welfare and feeling as well as fostering (Osokoya, 1996). Secondary school teaching skills as identified by Levine (1989) states that, apart from working with pupils, teachers are expected to work in harmony with parents, administrators, and colleagues, they must possess good human relations, skills and be prepared to communicate and work with these different factions on a day-to-day basis, sometimes under unpleasant circumstances. Equating intellectual development with age, failing to take into

account each pupil's unique experiences or rate of growth, is likely to result in classroom instruction that will neither interest pupils nor further their capacity to learn. A cooperative and supportive work environment will help teachers deal with the varied expectations placed on them and the stress they cause (Heck and William, 2004).

Activities for developing the teacher's qualities as identified by Kyiracou (2010) is that, the teacher can develop such qualities highlighted by engaging in activities that include reading of monthly professional journals and periodicals about current trends in education, new research, and a variety of ideas for classroom application contribute greatly in developing the teacher's qualities. Other activities are attending workshops, conferences and lectures so as to provide opportunities for teachers to become aware of, share practical suggestions and new ideas for teaching in their particular subject areas.Another activity is enrolment in education courses or degree programmes to provide opportunities to help teachers increase their skills and widen their perspectives of educational field in general through regular reading of variety of books in the field of education. Also, subscription to learning methods or learning styles network that aims at keeping teachers abreast of important and exciting research in the area of students learning styles, this is achieved through visits to university libraries and professional resource centres is another activity. Also regular sharing of experiences and ideas by members of staff in informal and formal contexts, particularly during lunch, at break time, afterschool, during conference periods, at official staff meetings, seminars and inter-classroom visitation can be of help. Visits to other schools to observe other teachers in their experience, quarterly self-evaluation of teaching effectiveness, regular reading of daily and weekly newspapers or periodicals, listening to radio and television for international news broadcasts as well as relevant educational

programmes are encouraged. Getting sufficient rest, relaxation exercise, healthy eating habits, rending recreational outlets and a balanced approach to life can be of immense help.

In an effort to identify teaching skills in this study, skills are defined according to Makama (2005) as everyday usage of a particular job. The word skills implies that some expertise in an activity developed as a result of training and or experience which enables the learner to perform particular tasks. Evans (2008) describes skills as any ability, generally assumed to have been learnt to perform a complex task involving psychomotor coordination with each, speed and accuracy. Alford (2009) refers to skills as consisting in the secondary schools teaching skills in choosing and carrying out strategies which are efficient. Howarth (2009) sees it as set of strategies adaptations to the mechanical limitation of the brain and of the body, which enable human purpose to be achieved. He goes further to claim that skills are built up gradually in the course of repeated training or other experience. For him, skills is serial, each part is dependent on the last and influences the next. Tomlison and Smith (2010) refer to teaching skills as purpose activities which enable teachers to achieve their goals. For them, such skills are executed with ease, speed and smoothness.

Evans (2009) sees teaching skills as strategies that teachers use to facilitate pupils' learning something worthwhile and which are acknowledged by those competent to judge as being skills. He further argues that the skills should be capable of being repeated. Adding all the definitions above, skill is all experiences acquired in the course of learning and where an individual would be able to apply for effective result in an atmosphere of need.Makama (2005) defines teaching skills in terms of the following features: they are intended to achieve a particular goal, they take account of the particular context, they require precisions and fine-tuning, they are performed smoothly, and they are acquired through training and practice. In

another contribution, Schulman (2003) identifies the following features of teaching skills as postulated in Makama (2005), teacher's knowledge about context, teacher's management and organisation, teacher's knowledge about curriculum materials and programmes, teacher's knowledge about the teaching of particular context topics, teacher's knowledge about pupils.

On the teaching process, Makama (2005) states that skills are categorised on the basis of teacher's knowledge about educational contexts, ranging from the classroom group to aspects of the community, teacher's knowledge about aims and values. In the same vein, Kyiracou (2010) analyses three important elements of teaching skills namely: knowledge – comprising the teacher's familiarity with the subject, pupils, curriculum, teaching methods, the influence on teaching and learning of other factors, and knowledge about one's own teaching skills; decision-making – comprising the thinking and decision-making which occurs before, during and after a lesson, concerning how best to achieve the educational outcomes intended, and, action – comprising the overt behaviour by teacher undertaken to foster pupils' learning. No doubt, teaching skills are discrete and coherent activities which the teacher has acquired through practice for fostering pupil's learning. Such skills are concerned with the various short-term and long-term problems faced before, during and after the lesson.

Individuals are different and they do things differently. These differences apply also to the issue of learning; people learn in different ways. Learning style, according to Vesser, Vreken and Mcchlery (2006), refers to a person's preferred approach to knowledge acquisition. To them, students learn in different ways: and the approach they prefer may be an important determinant in their academic performance. It was further explained that students' learning context is a broad term which encompasses a variety of student-related variables.As such, educators need to adopt approaches to teaching and assessment that enable students with different learning styles to learn

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

In the other side, some researchers argue that mismatching can help learners to overcome weaknesses in their cognitive styles, to develop a more integrated approach to their learning (Rush and Moore, 2001). According to Kowoser and Berman (2006), researches show that providing mismatches in teaching and learning styles can stimulate learning and flexibility in learning. Vaugham and Baker (2001) agree that matching may lead to learners becoming bored. Much have been written and there is a long-standing debate on the relationship between teaching and learning styles and their impact on students' performance. Kadiri (2004) notes that numerous studies suggest that learning in matched conditions may, in certain contexts, be significantly more effective than learning in mismatched conditions.

Carrier (2005) suggests that understanding the variables associated with successfully matching learning styles may prove to have a significant impact on learning achievement. However, Zhang (2006) consents that the literature on teacher/student style match/mismatch contains somewhat ambiguous findings, some arguing the benefits of the match, whilst others contend that the effect of matching is insignificant. Despite the argument for match/mismatch of

students learning styles to behavioural learning activities, it will be necessary for teachers to be conversant with students different learning styles which include among others: the learning style of Kolb, and Honey and Mumford, identified by Vesse, Vreken and Mcchlery (2006) which include Activist, Reflector, Theorist and Pragmatist such that; Activists act first and consider the consequences later, Reflectors prefer to ponder their experiences, observing them from different perspectives, Theorists try to adapt and integrate experiences into logical, complex theories. Pragmatists enjoy trying out new ideas, theories and techniques to see if they work in practice.

In view of the above, each individual has a unique combination of the four learning styles mentioned. It then becomes critical for teachers to study and know their students so as to be able to help them. Adding to this, Feder and Silverman (2004) develop Feder's model of learning styles which has four dimensions – Processing (Active/Reflective), Perception (Sensing/Intuitive), Input (Visual/Verbal), and Understanding (Sequential/Global).

Active/reflective dimension: active learners understand new information by doing something with it, while reflective learners prefer to think about new information before acting on it. Sensing/intuitive dimension: sensing learners are concrete, practical and oriented towards facts and procedures, solving problems by well-established methods. They are uncomfortable with abstract and theoretical information. While, intuitive learners prefer to discover possibilities and relationships themselves; and they are innovative in their approach to problem-solving. 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. Sequential/global learners: sequential learners understand new information in linear logical steps, while global learners learn in large leaps and think holistically.

Discussion Method**:** The method is a form of verbal instruction in which ideas, points of view, elements of subject matter and perceptions between two or more individuals are discussed. The purpose is to clarify or enrich understanding of the subject matter or copies (Makama, 2008). The purposes of the discussion method is to: serve as a potential activity in the development of cognitive understanding, serve as a potential activity in the influence of the affective domain on the individual's attitudes development and modification, serve as an activity to develop the individual's ability to participate in the various physical, social and intellectual realms associated with discussion experiences, provide the teacher with a means through which the participant reveals his/her strength, weaknesses and instructional needs.

In this method, there is a leader and some participants. The leader anchors the discussion, stimulates the discussion, regulates the involvement of the participants, evaluates the discussion, and moderates the discussion. The participants help in planning, goal setting, identifying a topic to be discussed, contributing to the discussion, evaluating the discussion, physical setting including sitting arrangement, should be such that participants face each other and the leader faces the participants. Phases in using the method as identified by Makama (2008) include the following:

1. Pre-discussion phase establishes goals, plans the agenda, prepares the participants, makes the physical arrangement, sets time and place, establishes the ground rules, and secures the necessary information.

2. Discussion phase clarifies and presents the topic, explains the purpose, communicates the ground rules, presents the issue to be discussed, participates in the discussion clarifies,

challenges, and raises questions, involves as many as possible, regulates the discussion, records important points and stimulates the discussion.

3. Third phase summarises the points or issues raised, draws conclusion, assesses the attainment of the goals, establishes follow-up activities, prepares written statement regarding the points covered, conclusion and goals attained.

The advantages of the discussion method include that the method is applicable to a wide range of topics and various grade levels, physical setting is very minimal, it can be used with many different sizes of groups, it is effective both in the affective and cognitive domain However, discussion method and performance of secondary school students on research work has not been carried out on teaching subject other than Commerce.

Field Trip:It is an instructional method that uses community resources as a primary source of information related to Vocational and Technical Education programme (Boud, Cohen and Sampson, 2001). The method allows students to have first-hand information or experiences in the community. Many of the institutions that offer vocational and technical education can hardly afford the necessary equipment needed in today's industrial/business setting. For this reason, most teachers tend to discuss more of the theory in most of their programmes. Such discussions will not bring the much-needed experience in a behavioural topic or unit. Taking the students outside the classroom to an industrial/business setting provides them an opportunity to see various equipments/materials and various processes discussed in the class. Procedure of the field trip includes developing the objective of the field trip, as stated in Boud, Cohen and Sampson (2001) that discuss the possibility of the trip with the members of the class. This should include the cost and the possible time, make the necessary arrangements with the organisation to be

visited, make the necessary administrative arrangement with the school authority regarding transportation and feeding if applicable, confirm and set date and time for the visit, and prepare students for the trip.

Boud, Cohen and Sampson (2001) suggest that the preparation should include the purpose of the trip, the highlights to be observed, the discussion on the content and the possible hazards to be encountered, make the trip, meet the host organisation, introduce the group and explain the purpose of the visit, listen to instructions by the guide/teacher, encourage students to take notes, regroup at the end of the discussion and express appreciation to the organisation, on return to the school, you must report to the authority and express appreciation, make any observation for future trips, follow the trip with class discussion and assignment, prepare key questions to encourage discussion in the class, write an evaluation report of the trip, write a thank you note to both the visited organisation and the school authority (Boud, Cohen and Sampson, 2001).

For learning activity package (LAP), Carrier (2005) says that it is a curricular vehicle, which is aimed at helping to facilitate individualisation of instruction. It is a structured programme of learning material that provides each student with alternative of how, who, when and where to learn while utilising a wide range of learning resources. The method can enable students to work their way through the series of learning activities that are much relevant to each of them at any given time and at a pace and level unique to each student. The method is designed to individualise instruction. Though it is for individualised instruction, it can also be used for group instruction. LAP, as an instructional tool, has been found to be psychologically and sociologically sound.

Carrier (2005) says that, in developing the learning activity package, it is believed that any subject matter can be learnt, provided the subject matter is broken into recognisable parts. The learner is informed regularly about his/her performance. It has been found that learning activity package is very useful as a teaching tool because of the following advantages: a) some students are allowed to skip the study and take the lest if competency is demonstrated; b) students are provided with additional information sheet that will assist them; c) the student decides when he/ she is ready to have his/her performance evaluated; d) the approach is economical in that, no sophisticated equipment is required; e) the approach can be adapted to a variety of programmes at various levels; and f) the teacher's role as a content manager of information dissemination will change to that of a learning monitor. This will include observing progress of students, diagnosing trouble and suggesting change.However in all the literatures, Field Trip method and performance of secondary school students on research work has not been used on teaching subject other than Commerce.

Seminar:Dynamic Flight (2014) poises that, seminar as a method of teaching is an organised gathering of students brought together to discuss and challenge one or more presentations. The presentation may be made by one or more members of the class. The presentation usually involves an in-depth preparation by the students which is of significant importance in the subject area. When the paper has been presented, it usually gives rise to various discussions, debates and challenges by the class members. It is the responsibility of the presenter to clarify or broaden issues raised. The presenter is often regarded as an expert on the subject, and as such, he/she should be able to defend his/her position. The decision to use seminar or series of seminars as an instructional method should be based on, the goals to be attained, the capability of the teacher, the capability of students and the nature of content.

Seminars, according to Dynamic Flight (2014), can be used to introduce new elements of content by students, explore the application of a theoretical concept, challenge or clarify selected elements of content, broaden the group's understanding regarding a selected subjects, ensure that the participants are comfortable and, draw together a number of theoretical concepts on a subject. Seminar as a method of teaching provides students the opportunity to challenge the accuracy or validity of material presented, amplify the content presented, give assistance to fellow students, introduce one or more elements into the discussion, react to the material presented, accept assistance from other students, evaluate the various points presented, listen to variety of reactions to a given topic and make suggestions concerning the topic or material presented. Both the teacher and students have separate roles in seminar presentation. The teacher is responsible for ensuring that each participant understands his/her role, ensuring that enough personnel are available as leaders and participants.

Presentation procedure according to Dynamic Flight (2014), depends on the nature, the topic, the experience of the participants and the leader of the group. The leader is responsible for the setting of the sitting arrangement and in providing any recording device, writing materials, name cards, note pads etc. The leader's role include, controlling the seminar activities, introducing the participants and their background, introducing the seminar topic, rules guiding the presentation and the time limit, discussing the agenda, introducing the first speaker, stimulating the discussion, providing the opportunity for varying points of views, treating all responses politely, keeping the discussion on the topic, keeping the discussion or presentation to the given time and, drawing the discussion to a close. The teacher's role in seminar presentation is very minimal. He provides assistance to the leader. After the presentation, the teacher is

expected to bring the discussion to a close by giving a brief summary and to appreciate both the participants and the visitors.

Seminar as a method of teaching, as identified in Dynamic Flight (2014), has the following advantages: it is suited to a variety of subject areas, its physical requirements are very minimal, it encourages a greater degree of students participation, it is formal and flexible, it is student-led, as such, provides the teacher the opportunity to observe them, it stimulates and tests students' power of comprehension and evaluation. However, seminar as a method of teaching in the secondary schools has not been used on research work other than Commerce as a teaching subject.

Industrial Work Experience Method:The other method that can provide similar experience is the Students' Industrial Work Experience Scheme (SIWES). In the method of SIWES, a student is sent to industry for a behavioural period where he/she is expected to have some practical experience in certain areas. For the method to be effective, it requires adequate planning and supervision (Carrier, 2005). The community has vast resources that can help educational institutions to acquire the needed experiences and most of these agencies and organisations are often willing to assist. Field trips satisfy the motivation of the desire to learn and indeed the actual learning. When students' interests are stimulated, their curiosity is aroused, and is exposed to the actual duties, skills and the requirements of the subject area, thereby, developing an insight into the need for learning the needed information. When students are exposed to various tools, equipments, machines, materials, and processes, it leads them to develop a better understanding and to appreciate the experience they receive in the school laboratory (Carrier, 2005).

Taking students to industry provides the opportunity to watch the actual performance of a behavioural process. By watching the process and the relationship of one operation to the other will no doubt stimulate interest in a behavioural area. It is common to note that learning is reinforced by recall of facts learnt and reasoning induced from observation of the actual situation, which is achieved by the field trip (Carrier, 2005). Adding to this method, he states further that, for a field trip to be effective, adequate preparation is necessary as it is in every aspect of teaching. The teacher must ensure that the place to be visited must be relevant to the needs of students as well as their security at the correct time. However, Industrial Work Experienceas a method of teaching in the secondary schools has not been used on research work other than Commerce as a teaching subject

Computer assisted instruction method (CAIM), according to Clark and Starr (2014), is an individualised method of instruction in which a computer is employed. In CAIM, a student is required to interact with the computer in a teaching and learning situation. A programme is developed using an appropriate language that the computer can understand to present the needed information. In developing the programme, careful consideration is given to what is to be presented to achieve optimal result. The material to be presented is broken into series of discrete steps using the principles of teaching and learning – from simple to complex, to the whole, easy to more difficult etc.

Commenting on CAIM, Dynamic Flight (2014) say that the programme provides for branching – an arrangement in which more information is provided to clear misunderstanding. Depending on the student response, they may be given some remediation frames or series of frames which will explain why his choice was wrong. When the additional information is satisfactory, the student is sent back to the same track as those who responded correctly in the

first place. Arrangements are also made for students with high aptitude and with the needed background on the unit to skip lesson and are sent to the difficult frame of the programme.

One basic fact about CAIM is that, it recognises individual differences and as such treats them differently (Clark and Starr, 2014). It is not limited to using words only but it can also use graphs, maps and diagrams to provide information. In this method, the computer can give information, ask question, criticise the answer/response, make use of gestations and even administer praise or reproof just as an individual teacher will do. The computer is patient and will take time to give all kinds of comments to students who get locked so that they can find a way out. It is not punitive and that each student can move at his own rate instead of being locked to the progress of the rest of the class.

Dynamic Flight (2014) identifies the advantages of CAIM that, it provides many students with individual attention and breaks the lock-up step of classroom where one is expected to do the same thing at the same rate, research studies have shown that students who were unreachable by ordinary school approaches showed high motivation and effective learning through the use of a computer. The method compared to the convectional one is more superior. According to Clark and Starr (2014), the cost per unit as revealed by research is far reduced compared to other methods. In other words, when we are thinking of cost reduction in the long run, CAIM is a viable option. It enables all students to go through the same material but at their own rate, it shortens the time required to master factual data in most subject area, it is more effective or better than classroom instruction with respect to students' achievement as measured by written and or performance test.

The role of attraction is also reduced; it has the capability to reduce the learning time to a significant degree relative to average classroom instruction, the tutorial approach is a viable instruction method in the presentation of education materials. One of the greatest economic advantage of CAIM is in the generation and scoring of objectives examination, thus, freeing the teacher for diagnostic work and material preparation. Its immediate feedback acts as a motivation and as such, improves learning (Clark and Starr, 2014). This proved that the method has the ability to perform repetitive than any other method in the study. However, Computer assisted instruction as a method of teaching in the secondary schools has not been used on research work other than Commerce as a teaching subject

The Optional Assignment Method (OAM):In discussing a more detailed method of teaching, Dynamic Flight (2014) explains that, it revolves around a system of affording students the freedom of choosing assignments or problems selected from a series of units. These problems are designed to lead students through a comprehensive variety of topics. In each unit, assignments are carefully developed in a progressive manner, starting from the simple to the complex and, students are required to choose from. The assignments vary in degree of difficulty and points are also attached to them. The points vary from one problem to the other, depending on the complexity of the problem. In other words, the more complex a problem is, the more marks it attracts and, the less complex the problem, the fewer the points.

The method allows students to move to the next unit if they feel satisfied with the points or grade earned. The method works best with high achieving students who are willing to work independently. According to Dynamic Flight (2014), teachers are interested in using the method in teaching a behavioural course which will require them to choose or select and maintain the textbook for the course. The main course could be one or more, depending on the need. The

required textbooks should be a requirement for all students. The course is divided into units and the division may be on operations, activities, materials, machines, equipment, services or related theory. He adds that, the division should represent a distinct function within the course, problems or assignments are developed with the corresponding grading scale in each unit, the grading scale may vary from unit to unit depending on their complexity, and in each unit, and a pre-requisite is provided. This may be necessary to avoid students moving to a unit that they are not ready for. He suggests that time should be provided for each unit to serve as a guide to students to avoid some overstaying on a behavioural unit.

The role of the teacher in this method is that, he/she is expected to break the content into teachable units, develop possible questions with varying degree of difficulty, develop points for each question, develop unit's pre-requisite, present information on each unit, mark or score students assignments and serve as a resource person to students. Roles of the students in this method are expected to attend the general information presentation, decide on the assignments to work on, and complete the required assignments (Dynamic Flight, 2014).

The advantages of the optional assignment method have been identified by Dynamic Flight (2014) that, it provides a comprehensive study of the subject and affords students the flexibility of selecting whatever topic they may be interested in, not requiring any special teaching aid other than the required text and sometimes drawing instruments in case of technical drawing. Students can decide on the grade they want and work towards it. It encourages students to work harder, allowing them to see a direct link between their efforts and their grades, with each student moving at his/her own pace and still covering the same material. It treats students as individuals and not as a class, applicable to various subject areas and can cut across some levels, allowing the teacher to assume the role of information manager. However,

optional assignment **as** a method of teaching in the secondary schools has not been used on research work other than Commerce as a teaching subject

Role Play Method**:** The method is designed to provide students the opportunity to increase their learning situation. In line with Serena (2010), it is an educational strategy that involves the individual student in assuming the task, duties and responsibilities of a particular person associated with an industrial, business, and community or government organisation. The main purpose is to enrich and develop the students understanding in relation to a particular role or position, the effectiveness of the method depends on the teacher and the student resourcefulness to inject reality into the process. Some of the important purposes of the method as identified by Serena (2010) include:

1. An activity for more extensive involvement in the part of the student.
2. A firsthand experience to the student in order to increase meaning and their understanding.
3. The simulation and motivation necessary to pursue the position as a career.
4. A means of reinforcing the self as well as becoming somebody among his pairs.
5. A means for the teacher to observe students in their performance of the task, duties, and responsibilities of a behavioural position in which they have interest.
6. A means of instruction, largely student generated and self-actuated.
7. Student with an excellent tool for the development of understanding related to career education.
8. An opportunity in which students can demonstrate responsibility in leadership, communication and social interaction.
9. Students with the opportunity in which they can learn or teach about the role position as they perform the task associated with it.

Serena (2010) states the following procedures in the use of role play method in the teaching-learning situation:

I. Determine the roles needed to be performed in order to meet the educational objective.
II. Identify the source and resources available for learning about the duties, responsibilities, contributions or requirements related to a particular role.
III. Keep the actual activity within the normal structural relationship as in real life situation. Students' performance and this should be free from outside interference by the teacher.
IV. Evaluate the role play activity to see if the goal/objectives have been achieved.

Serena (2010) enumerates the following as the role of the teacher in the teaching-learning situation. In this method the teacher is expected to perform the following:

I. Identify the role playing activity.
II. Clarify the nature of the activity and communicate to students.
III. Projects the possibilities for the roles to be played.
IV. Establish and clarify the goals to be achieved.
V. Assist students in the selection of appropriate roles.
VI. Facilitate the collection of information from the community.
VII. Observe the progress and performance of the students.
VIII. Monitor the total class role performance in order to clarify or adjust the process.
IX. Evaluate the contribution that the role playing experience has made.

Serena (2010) states the following as the role of students in the learning experience. These include:

I. Associate with the information of the role he/she is involved.
II. Inquire about his association with the process.
III. Investigate the duties and responsibilities of the role to play.
IV. Investigate written materials, books etc., and the job description.
V. Consult person in the role position in the industry, business or government organisation and interview them to get as much information as possible.
VI. Develop the role to be played/activity to be performed.
VII. Perform the role.
VIII. Interact in the role with other students.
IX. Evaluate his/her performance.

However, role play as a method of teaching in the secondary schools has not been used on research work other than Commerce as a teaching subject

2.2.5 Concept of Performance and Gender

Looking at the concept of performance in a wide range, Pomperaug Regional District of Educators (1996) identify that in the act of learning, people obtain content knowledge, acquire skills, develop work habits, practise the application to the "real world" situations, and create the significance of performance in the learning process. Therefore, performance-based learning and assessment represent a set of strategies for the acquisition and application of knowledge, skills, and work habits through the performance of tasks that are meaningful and engaging to students.

The subject area content can come from already defined curriculums or can be enhanced by the adoption of a set of themes or topics by the department, grade-level, team, school, or school system (Greaney, 2001).According to Greaney (2001) performance-based learning and assessment achieve a balanced approach by extending traditional fact-and-skill instruction. Performance-based learning and assessment are not a curriculum design. Whereas you decide what to teach, performance-based learning and assessment constitute a better way to deliver your curriculum. Teachers do not have to "give up" units of study or favourite activities in a performance-based classroom. Because authentic tasks are rooted in curriculum, teachers can develop tasks based on what already works for them. Through this process, assignments become more authentic and more meaningful to students. Traditional testing helps answer the question, "Do you know it?" and performance assessment helps answer the question, "How well can you use what you know?" These two ways of looking at literacy do not compete; the challenge is to find the right balance between them (Greaney, 2001).

Time management, individual responsibility, honesty, persistence, and intrapersonal skills, such as appreciation of diversity and working cooperatively with others, are examples of work habits necessary for an individual to be successful in life (Onuka and Oludipe, 2005).Higher-order thinking or process skills can come from various disciplines such as, writing or proof reading from Language Arts or Mathematics computation and problem-solving skills. Other process skills cut across subject area lines or may be identified as areas of need, based on standardised testing e.g., analogies, categorising information, drawing and inferences (Greaney, 2001).According to Onuka and Oludipe (2005), performance tasks are built on earlier content knowledge, process skills, and work habits, and are strategically placed in the lesson or unit to enhance learning as the student "pulls it all together." Such performance tasks are not "add-ons" at the end of instruction, they are both an integral part of the learning and an opportunity to assess the quality of student performance. When the goal of teaching and learning is knowing and using, then the performance-based classroom emerges.Onuka and Oludipe (2005) performance tasks range from short activities taking only a few minutes to projects culminating in polished products for audiences in and outside the classroom. In the beginning, most performance tasks fall on the short end of the continuum. Teachers find out that many activities they are already doing can be shaped into performance-learning tasks. Two initial concerns of teachers moving towards performance-based classrooms include the amount of time needed for performance tasks and the subjectivity traditionally associated with teacher assessment and assigning "grades".

Onuka and Oludipe (2005) say that the initial move to any new method involves an investment in time. The development of performance-assessment tasks is no exception. With a

little practice, however, teachers find that they can easily and quickly develop performance tasks and assessment lists. This process is further simplified as teachers and schools begin to collect and maintain lists of generic tasks and assessments that teachers can adapt for individual lessons. Teachers find assessment lists a more efficient way of providing feedback to students than traditional methods, thus saving time in the long run. Finally, as students work with performance assessment, the quality of their work improves, reducing the time teachers must spend assessing and grading students work.

Genderrefers to the attitudes, feelings, and behaviors that a given culture associates with a person's biological sex. Behaviour that is compatible with cultural expectations is referred to as gender-normative; behaviors that are viewed as incompatible with these expectations constitute gender non-conformity. Gender identityrefers to one's sense of oneself as male, female, or transgender (American Psychological Association, 2006). When one's gender identity and biological sex are not congruent, the individual may identify as transsexual or as another transgender category (Grummer, and Richard 2011). Gender expression refers to the way in which a person acts to communicate gender within a given culture; for example, in terms of clothing, communication patterns and interests. A person's gender expression may or may not be consistent with socially prescribed gender roles, and may or may not reflect his or her gender identity (American Psychological Association, 2008). Sexual orientationrefers to the sex of those to whom one is sexually and romantically. Gendernot as given, but as an accomplishment; not simply as cause, but as effect; and not just asindividual, but as social.

Sex and gender: Gender is not something we are born with, and not something we have, but something we do, something we perform(Butler 2012). Imagine a small boyproudly following his father. As he swaggers and sticks out his chest, he is doing everything hecan to be

like his father – to be a man. Chances are his father is not swaggering, but the boy iscreating a persona that embodies what he is admiring in his adult male role model. The same istrue of a small girl as she puts on her mother's high-heeled shoes, smears makeup on her faceand minces around the room. Chances are that when these children are grown they will notswagger and mince respectively, but their childhood performances contain elements that maywell surface in their adult male and female behaviors. Chances are, also, that the girl will adopt.Gender refers to the array of socially constructed roles and relationships, personality traits,attitudes, behaviours, values, relative power and influence that society ascribes to the two sexeson a differential basis. Whereas biological sex is determined by genetic and anatomicalcharacteristics, gender is an acquired identitythat is learned, changes over time, and varieswidely within and across cultures. Gender is relational and refers not simply to women or menbut to the relationship between them. Glossary of Gender-related Terms andConcept Gender refers to the economic, social and cultural attributes and opportunities associatedwith being male or female at a particular point in time (Connell, 2013)Sex marks the distinction between women and men as a result of their biological, physical andgenetic differences. Gender roles are set by convention and other social, economic, political andcultural forces.From this perspective, sex is fixed and based in nature; gender is fluid and based in culture. Thisdistinction constitutes progress compared with 'biology is destiny. However, it ignores the existence ofpersons who do not fit neatly into the biological or social categories of women and men, such asintersex, transgender, transsexual people and hijras. Furthermore, for many people the sexcategories of female and male are neither fixed nor universal, but vary over time and across cultures.Accordingly, sex, like gender, is seen as a social and cultural construct

2.2.6 Concept of Commerce

The concept of commerce that embraces the activities of trade in the society as identified by Akrani (2011) includes the following:

1. Commerce helps us to increase standard of living:Standard of living refers to quality of life enjoyed by the members of a society. When man consumes adequate products, his standard of living improves. To consume a variety of goods, he must be able to secure them first. Commerce helps us to get what we want at the right time, the right place and at theright price and thus helps in improving our standard of living.
2. Commerce links producers and consumers:Production is meant for ultimate consumption. Commerce makes it possible to link producers and consumers through retailers and wholesalers and also through the aids to trade. Consumers get information about different goods through advertisements and salesmanship. The manufacturers are regularly informed about the likes and dislikes of the consumers through marketing research. Thus, commerce creates contact between the centers of production and consumption and links them.
3. Commerce generates employment opportunities: The growth of commerce, industry and trade bring about the growth of agencies of trade such as banking, transport, warehousing, advertising, etc. These agencies need people to look after their functioning. Increase in production results in increasing demand, which further results in boosting

employment opportunities. Thus, development of commerce generates more and more employment opportunities for millions of people in a country.

4. Commerce increases national income and wealth:When production increases, national income also increases. In a developed country, manufacturing industries and commerce together accounts for nearly 80% of total national income. It also helps to earn foreign exchange by way of exports and duties levied on imports. Thus, commerce increases the national income and wealth of a nation.
5. Commerce helps in expansion of aids to trade:With the growth in trade and commerce there is growing need for expansion and modernisation of aids to trade. Aids to trade such as banking, communication, advertising and publicity, transport, insurance, etc., are expanded and modernised for the smooth conduct of commerce.
6. Commerce helps in growth of industrial development:Commerce looks after the smooth distribution of goods and services made available by the industry. Without commerce, industry will find it difficult to keep the pace of production. It helps to increase demand for goods on one hand and on the other hand, it helps industries by getting them the necessary raw materials and other services. Hence, commerce helps in attaining better division of labour and industrial progress.
7. Commerce encourages international trade:Through commerce we can secure a fair and equitable distribution of goods throughout the world. With the help of transport and communication development, countries can exchange their surplus commodities and earn foreign exchange, which is very useful for importing machinery and sophisticated technology. It ensures faster economic growth of the country.

8. Commerce benefits underdeveloped countries: Underdeveloped countries can import skilled labour and technical know-how from developed countries, while the advanced countries can import raw materials from underdeveloped countries. This helps in laying down the seeds of industrialisation in the underdeveloped countries.
9. Commerce helps during emergencies:During emergencies like floods, earthquakes and wars, commerce helps in reaching the essential requirements like foodstuff, medicines and relief measures to the affected areas.

2.2.7 Review of Empirical Studies

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

Audu (1996) conducted a research on the teacher perception of problem-solving method in teaching Social Studies, the affecting domain in Kaduna State. The major objective which determine teacher perception of problem-solving method in teaching Social Studies, on the affecting domain while four behavioural objectives were stated for the study to determine the teacher's awareness of problem-solving approach in the teaching of Social Studies. To identify the problem-solving method in the lecture method of teaching Social Studies, four research questions were raised for the study among which include, what is the approach in the teaching of Social Studies among teachers in the secondary schools? What is the problem-solving method of teaching Social Studies in the secondary schools? There were four null hypotheses in the study and the population of the study was 9,450 junior secondary school students in Kaduna State. The sample of the study was 2,362.5 represent 25% of the total population. The methodology used by the researcher was ex-post facto survey, research and the statistical tool used was the non-parametric statistic (Spearman Rank ordered correlation). One of the findings states that there is no behavioural method of problem-solving in lecture method of teaching Social Studies in the secondary schools. Another finding reveals that there is no single approach in the teaching of Social Studies in the secondary schools.

The difference from the past research study and the present study is on basis of the methodology and the subject matter of the research. Also, the present study is on senior secondary schools while the past is on junior secondary schools. Again that the past research design was on ex-post facto survey while, the present research is on quasi-experimental design.

The similarity of the past work to the present is that the past work was on students in Kaduna State while, the present is on students in 2015.

Abu (1998) carried out a research on the effectiveness of individualised and lecture instructional methods on teaching Biology at the senior secondary schools in Katsina State. The major objective of the study includes, to identify the effectiveness of individualised and lecture instructional methods of teaching Biology at the Senior Secondary Schools in Katsina State. While the behavioural objectives include to determine the effectiveness of individualised instructional methods of teaching Biology at the senior secondary school in Katsina State. To determine the effectiveness of lecture methods of teaching Biology at the senior secondary school in Katsina State, Four research questions and hypotheses were stated among to include, what is the effectiveness of individualised instructional methods of teaching Biology at the senior secondary school in Katsina State? What is the effectiveness of lecture methods of teaching Biology at the senior secondary school in Katsina State?

There is no significant relationship between Biology and individualised instruction method of teaching. There is no significant relationship between Biology and lecture method of teaching. The findings of the study reveals that individualises instruction method of teaching Biology played significant role than the lecture method of teaching Biology in the secondary schools. The lecture method of teaching Biology played significant role in learning coverage of students in the secondary schools.

The past study was different from the present study on basis of the study subject. The past study was on Biology, which is a science subject while the present study is on Commerce being a vocational subject. However the similarity is that all are in secondary schools. Besides

that the level of research is the same at the secondary schools, although the past research became an eye opener to the present study.

Rosini (2000) conducted a research on the effects of cooperative methods on achievement, retention, and attitudes of Home Economics students in Ahmadu Bello University, Zaria. The objectives of the study were to determine the effects of cooperative learning approach of students' team's achievement divisions (STAND) on the achievement of content knowledge, retention and attitudes towards the teaching method. Cooperative leaning was compared to non-cooperative (competitive learning, classroom structure, using a quasi-experimental design). An achievement test, consisting of items from the state competency test – item bank for the course, and an attitude questionnaire were administered immediately, following instruction in the unit of special national needs. Research questions were stated. The population of the study consisted of Home Economics students in senior secondary schools, with ninety-one students in the cooperative learning group and one hundred and six students in the non-cooperative learning group. There was also no significant difference in students' attitudes towards the teaching methods. The findings of the study states also that, cooperative learning was found to be more effective than non-cooperative learning group with respect to Home Economics students' achievement and retention. However, the researcher had no null hypotheses to further probe into the research questions, and the study was in 2000, while the present study is 2015.

The past researchwas different from the present study on the study subject, that is, the past research is on Home Economics while the present study is on Commerce. In addition the level of research study differs because the Home Economics are based on the university students, while the Commerce is on the secondary school students.

The past research work is related to the current research work on the basis of methods of solving problem in the secondary school and again the design of the study is quasi-experimental study. The literature review of the research work is of importance to the current research and some of them are used applied.

Kadiri (2004) carried out a study on the effects of interactive teaching techniques and strategies on junior secondary school achievement in Social Studies in Kano State. The objective of the study was to determine the effects of interactive teaching techniques and strategies on junior secondary schools achievement. The design used for the study was pre-test post-test control group non-randomised quasi-experimental design. The population used was 4,486, and the sample size was 2,243, representing 50% of the population. Four behavioural objectives were raised; four research questions and four null hypotheses. One of the findings of the study stood as there were no behavioural teaching techniques and strategies in the teaching of Social Study at the junior secondary schools in Kano State.

The difference between the past research and the present study is that, the past research gave attention on the junior secondary schools in Kano State, while the present study gives attention to the senior secondary schools in Kaduna State. The subject content of the past research was on Social Studies while the present subject content is on Commerce. Again another differences is that, the research was in 2004 while the present study is on 2015. However, the study is similar to the present study on the teaching techniques and strategies used in teaching students at the secondary schools.

Adeyemi (2005) carried out a study on the effects of cooperative learning and problem-solving strategy on junior secondary school students' achievement in social studies in Osun

State. The objectives of the work included, determining the effects of cooperative learning and conventional strategies. The design used for the study was pre-test post-test control group non-randomised quasi-experimental design. The study made use of 150 students that were selected using stratified cluster sampling technique. The reliability instruments used for the study were achievement test with a split-half reliability coefficient of 0.78 instrument package on cooperative training strategy with a split-half reliability index of 0.92 instrument package on problem-solving strategy with a split-half reliability index of 0.84. The researchers used Analysis of Covariance (ANCOVA) to analyse the data from the post-test and pre-test. The findings of the study includes, among others, that cooperative learning group had a higher adjusted post-test mean score of 11.89, which means that the cooperative learning group performed better.

The difference in the past work is that, it was conducted on effects of cooperative learning and conventional strategies on junior secondary school students' achievement in social studies in Osun State, while the present study is on effects of cooperative, problem-solving methods on performance of secondary schools students in Commerce in Kaduna State. However, the level of study differs in that, the past study was on junior secondary schools, while the present study is on senior secondary schools.

The past research related to the current study on the ground that, the research is on students at the secondary schools and the research is on quasi-experimental study.

Shefali (2009) researched on interactive effect of cooperative learning model and learning goals of students on academic achievement of students in mathematics. The study sought to ascertain whether the effect of cooperative learning model is equally effective on students with mastery and performance goals.

The study used quasi-experimental and factorial design for conducting the experiment. The experiment was conducted on one hundred and fifty three students of junior secondary schools. It used two tools – achievement test in mathematics and learning goals inventory – both developed by the researcher. The techniques used to test the null hypotheses included the t-test, ANOVA and ANCOVA. The findings of the study includes, among others that; cooperative learning group was better than the conventional group in performance.

The difference on both studies is that, the past study was on cooperative learning model, while the present study is on cooperative, demonstration and problem-solving methods. Besides, the population was on Mathematic students, while this is on Commerce students which is a vocational subject. The study used quasi-experimental and factorial design for conducting the experiment whereas the present study uses quasi-experimental design.

The present study is similar to the past study on the basis of teaching methods and the research was based on students in academic pursuit. The researcher used large population and better statistical tools and, as such, a good result emerged which will be helpful for the current research study.

Gokhan (2010) research is on the effect of different learning methods on students' approach to general gymnastics course and academic achievements for universities' students at Agric Ibrahim Cecen University (AGRI) Turkey. The objective of the research was to determine the effective of two different teaching methods over students' academic achievements and their general approach to gymnastics class and to measure students' opinions on the different learning methods. The study was made up 50 university students. Treatment groups were selected randomly for this research.

The following sets of instruments were used for data collection: the learning style inventory (LSI), the gymnastics academic achievement test (GAAT), gymnastic practicing evolution forms (GPEF), the gymnastics attitude scale (GAS) and the student opinion scale (SOS). The data collected were subjected to analysis using Ch-square for data set from LSI test; descriptive statistic and one ANOVA for pre-test and post-test data from the GAAT and GPEF tests, and independent sample t-test for data sets from GAS' liker type questions. The findings of the study included that, theoretical and practical skills of students who were exposed to the different learning improved greater than those of the students who were exposed to the traditional learning.

The difference on the study is that, the past was on gymnastic course which is in the field of Physical and Health Education, while the present study is on the vocational course. The sample population differs from the present study and the levels of educational study is different from the present study.

The past research work related to the current research on the teaching strategies towards students' performance. It is useful to the current research as it explains more on the methods of teaching whereby the current researcher utilises part of the literature.

Okoli (2011) carried out a study on the comparative study of using problem-solving and teacher demonstration methods on students' performance in Financial Accounting, a study built on schools in Gombe State. The researcher raised four behavioural objectives for the study which include; comparing the performance of students taught with the conventional method; determine the differences in the performance of students taught with problem-solving method and those

taught with teacher-demonstration method. Four research questions were also stated. The researcher used quasi-experimental research design.

The researcher had two treatment groups (problem-solving and demonstration groups) and one control group (conventional lecture method) of 30 subjects each group. Financial Accounting Test I and II (FAT I and II) were administered to determine the performance of the students. The findings of the study include that, problem-solving group performed better than the other groups.

The difference in this research is that, the earlier study was carried out on schools in Gombe State and was on Financial Accounting students, while the present study is on Commerce students in Kaduna State. Both works are related on the basis of two methods of teaching and as well as the design. The work was helpful to the present researcher as the research drew most of literatures from it. However, the researcher found out that, there is significant difference in the performance of the students in the three groups, but she failed to run a further post hoc test like, Ducan, Sheffe and others to find the group that caused the difference.

Muhammad's (2011) conducted research on effect of learning in academic achievement of secondary school students in Mathematics in Borno State. The study had four behavioural objectives which included; to examine the effects of cooperative learning on the academic achievement of low-achievers in Mathematics at secondary level. Research questions were not stated and the researcher used experimental research design in the methodology. The population for the study was fifty-three students only. Reliability was determined by using spearman – Brown's prophecy formula. Analysis of variance was used to test the treatment effects for high and low achievers of the experimental and control groups on post-test and retention tests.

The findings of the study include, among others, experimental group students performed significantly better than the control group students. However, the previous research did not use random technique in selecting the sample. The difference is that, the subject matter in the study was on Mathematic which is science subject, while the present research is on Commerce which is a vocational subject. Besides, the past research population was 50 students while the present research population is higher than that.

The past study related to the current study through the methods of assessing learning in the secondary schools. The previous research explained effects of learning in academic achievement, while the present research is on effects of cooperative, demonstration and problem-solving methods on performance of secondary schools in Commerce. The researcher's findings and recommendations helped the current researcher in the choice of objectives.

Tsoho (2011) conducted a research on effects of problem-solving and student-centred teaching strategies on students Geometry performance and retention in junior secondary schools in Kano State. The study identified four objectives among which include to compare the effectiveness of problem-solving approach using student-centred teaching strategy through student's performance in Geometry at the junior secondary schools. Determine the effects of problem-solving and student-centred teaching strategies on gender in Geometry at junior secondary schools.

The research questions included, what is the effectiveness of problem-solving approach using student-centred teaching strategy through student's performance in Geometry at the junior secondary schools? What are the effects of problem-solving and student-centred teaching strategies on gender in Geometry at junior secondary schools? Four null hypotheses were stated

in order to highlight the findings of the study. These included that, there is no significant relationship on the mean of student's performance in Geometry effectiveness of problem-solving approach. There is no significant relationship on the mean of gender in Geometry and problem-solving towards student-centred teaching strategies.

The population of the study constituted of 858 students and the sample of the study was 429 students, representing 50% of the population. Analysis of covariance was used as the statistical tools for the null hypotheses, while mean and standard deviation were used for the research questions. The findings revealed that the male students performed significantly better than the female counterparts in GAT using problem-solving method, while the female students significantly performed better than their male counterparts in GAT using student-centred learning strategy.

The past study differed from the present study on the grounds that, it centred on mathematic concept, Geometry, whereas the present study is centred on Commerce, a concept of vocational study but one of their similarities is that, both are on secondary schools. Besides that, the past study helped the present study on the areas of objectives, research questions and hypotheses.

Mshelia (2012) carried out a research on comparative study of effectiveness of two teaching methods on student's performance in Shorthand at colleges of education in the North East Geopolitical Zone of Nigeria. The main objective of the study included finding out the effectiveness of three teaching methods on students' performance in Shorthand on the study area. While the behavioural objectives, among others included, to determine the effectiveness of demonstration method of teaching Shorthand in the colleges of education in the North East. To

ascertain the effectiveness of assignment method of teaching Shorthand in the colleges of education in the North East.

The research questions and null hypotheses were stated, among others to include, what is the extent of effectiveness on demonstration method of teaching Shorthand in the colleges of education in the North East? What is the extent of effectiveness on assignment method of teaching Shorthand in the colleges of education in the North East? There is significant relationship in the teaching of Shorthand at the colleges of education and effectiveness of demonstration method. There is significant relationship in the teaching of Shorthand in the colleges of education and effectiveness of assignment method. The population of the study comprised of all the students who `offered Shorthand in the North East colleges. The sample population comprised of 148 students who studied Shorthand in the colleges of education in the North East. The findings of the study included that demonstration methods of teaching Shorthand in the colleges of education have great impact in the teaching-learning of Shorthand students in the colleges of education in the North East.

The difference onthe past and the present study is that, the past study was on two methods of teaching whereas, the present study is on three methods of teaching. Another difference is that the past study was on Shorthand whereas the present study is on Commerce. The study was carried out on the North East colleges of education whereas the present study is on secondary schools in Kaduna State.

The similarity of both studies is that, all are on teaching methods and centred on students even though the study area is different. Both studies are on quasi-experimental and are on vocational students. The past study became an eye opener to the present researcher work in 2015.

Oyinloye (2014) conducted a research on the comparative study of computer assisted instructions and traditional methods of teaching keyboarding among students of polytechnic in South West Geopolitical Zone of Nigeria. The study stated one major objective and four behavioural objectives among which include, to compare computer assisted instructions and traditional methods of teaching keyboarding among polytechnic students in South West. While the behavioural objectives are to compare the speed and accuracy of students taught with computer assisted instructions method and lecture method of teaching keyboarding in polytechnics in the South West. To compare the speed accuracy level of male and female students taught with computer assisted instruction method of teaching keyboarding in polytechnics in South West.

Four research questions were stated and null hypotheses were formulated among which include, what is the extent of speed and accuracy of students taught with computer assisted instructions methods and lecture method of teaching keyboarding in polytechnics in the South West? What is the difference between the speed accuracy level of male and female students taught with computer assisted instruction method of teaching keyboarding in polytechnics in South West? There is no significant difference between the mean score of pre-test and post-test of students taught speed and accuracy using computer assisted instruction. There is no significant difference between the mean score of pre-test and post-test of students taught speed and accuracy using traditional method. The mean and standard deviation was used to test research questions while t-test statistic was used to compare the mean groups.

The findings revealed that there was a high performance in the speed and accuracy of students that had been taught with computer assisted instructions over those of traditional method of teaching keyboarding in polytechnics. The study showed that female students were

better in terms of speed and accuracy than male students in computer assisted instruction method.

The difference on the past study and the present study is that, the past study was on computer methods of teaching among students of polytechnic in the South West Geopolitical Zone, whereas, the present study is on Commerce performance in the secondary schools in Kaduna State.

The similarity with the present study is that, both are on vocational subjects. However, the past study enlightened the present researcher on the choice of statistical tool towards the final analysis of the present research.

2.2.8 Summary of Reviewed Literature

In this chapter literature was reviewed onCooperative method of teaching,Problem-solving method of teaching and Demonstration method of teaching. Literature is also reviewed regarding to concept of performance and concept of commerce. Thirteen empirical studies were also reviewed, from the reviewed made, none of the authors investigate on the topiceffects of cooperative, demonstration, and problem-solving teaching methods on the performance of secondary schools students in Commerce in Kaduna State, Nigeria.It is on this that none has attempted to answer the appropriate method of teaching Commerce of which this study has tried to answer in order to reduce growing concern of student's poor learning of Commerce in Kaduna State. This therefore, closes the existing gap in the empirical studies.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter described the area of the study and procedures that was employed in carrying out the study. Therefore, the chapter centred on the following subheadings:

3.1 Research Design

3.2 Population of the Study

3.3 Sample Size and Sampling Procedure

3.4 Instrument for Data Collection

3.4.1 Validity 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 adopted for this study was quasi-experimental design, using three methods of teaching. Quasi-experimental design is a design that the sample lackrandomisation(Olayiwola 2007).The design allows for maximum control of extraneous variables.(Olayiwola 2007) that the intact nature of the groups minimises artificiality that the true experimental design is known for. As a result, the study can be carried out withthe participants' knowledge of participating in an experiment. In line with Olayiwola (2007), the design may use

control group. This solves the problem of difficulty in looking for a comparable group (Emmanuel, 2013)

3.2 Population of the Study

The population of the study was 6,651 SSS I students,as shown in Table 1, the details of the schools, according to their locations, is shown in appendix B.

Table 1 Population of the Study

S/N	Educational Zones	Number of Public Schools	No. of Male Students	No. of Female Students	Total No. of Students
1.	Achau	30	283	285	568
2.	Birnin-Gwari	18	287	181	468
3.	Giwa	16	285	285	570
4.	Godogodo	22	281	289	570
5.	Kaduna	37	284	282	566
6.	Kachia	34	289	238	527
7.	Kafanchan	40	286	285	571
8.	Lere	13	287	280	567
9.	Riga-Chikun	22	283	252	835
10.	Sabo-Tasha	37	288	290	578
11.	Zaria	31	282	279	561
12.	Zonkwa	34	285	285	570
Total		**334**	**3420**	**3231**	**6651**

Source: Kaduna State Ministry of Education (2014)

3.3 Sample Size and Sampling Procedure

The sample size was sixty (60) senior secondary school students.Purposive sampling was used to select three schools from Giwa Educational Zone for the experiment, viz, Government Secondary School (GSS) Basawa, Government Secondary School (GSS) Shika and Government Secondary School (GSS) Kwangila. The Schools were used because they were oldest schools that offered Commerce as a subject and had a sizeable number of students and teachers that are teaching them. The sampling procedure was purposive because it allowed the choice of schools for the study and due to the students' relevance in the research. Therefore, out of the six thousand six hundred and fifty one students population of the study, twenty students were used in each school comprising of ten males and ten females purposively sampled. This was in line with the submission of Nworgu (2001) that, the researcher is free to take a convenient sample to represent the total population. The sample population is as given in Table 2.

Table 2 **Sample Size**

State	Educational Zone	School	No. of Male Students	No. of Female Students	TotalNo. of Male and female Students
Kaduna	**Giwa**	**GSS Basawa**	10	10	20
		GSS Shika	10	10	20
		GSS Kwangila	10	10	20
Total			30	30	60

Source: Researcher's Designed (2015)

The procedure for selecting students from the population in the schools was done through the use of pre-test. The students who have scores of 20 marks and above were selected purposively to get the ten males and ten females from the population of the students in the class. The breakdown of the sample population is as given in Table 3.2.

3.4 Instrument for Data Collection

Based on the fact that the research study is quasi-experimental, the topic that was used for the study is Production. Production was chosen (taught) because the study was quasi-experimental. Commerce achievement test (CAT) was used as an instrument to collect data which was divided into two sections, that is, A and B. Section A consisted of twenty objective questions which carried 3 marks each, giving a total of 60 marks for the 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 marks of both sections were 100%. The instrument was adopted from Ministry of Education, Examination and Resource Centre 2013 (ERC), West

African Examination Council 2013 (WAEC), and National Examination Council 2013 (NECO). The breakdown of the instrument is as shown in appendices. K-M. A Commerce test was designed by the researcher which was administered to the students as pre-test and post-test.

Twelve (12) lesson plans and lesson notes were prepared as a guide for both cooperative, problem-solving and demonstration method for effective teaching of the topic. The instructions were drawn based on WAEC 2013, NECO 2013and ERC2013 respectively. Details of the lesson plans are shown in the appendices D-J.

3.4.1 Validation of the Instrument

In order to ensure that the instrument in the topic used, measure the content validitythree senior lecturers in the Department of Vocational and Technical Education, Ahmadu Bello University, Zaria, and two experts in test and measurement of the Department of psychology,Ahmadu Bello University, Zaria. The instrument was critically examined based on fitness for the purpose of this study. The expert's corrections and suggestions improved the instrument structure andthe instruments was used for the study.

3.4.2 Pilot Study

A pilot study was conducted in Demonstration Secondary School, ABU, Zaria, because the students share the same characteristics with the students in the study area and the schools offer Commerce, which is the subject of the study. According to Emmanuel (2013), a pilot study can be administered in different study areas as far as the characteristics are similar to the study area. The pilot study was administered to obtain the reliability of the instrument. A t-test statistics was used to analyse the reliability of the instrument

3.4.3 Reliability of the Instrument

The reliability of the instrument was determined by the statistical analysis of the data collected from the pilot study. The split-half method was used, where the data were divided into two halves of 'odd' and 'even' numbers, and the reliability of the whole instrument were determined using Spearman Rank Correlation Coefficient. The reliliablity Coefficientof the three methods are 0.84 for Cooperative method, 0.76 for problem-solving method and 0.82 for Demonstration method. As indicated on the coefficient, each instrument was significant (Nworgu, 2006). In addition, the results of the pilot study provided the researcher with the basis for the following decisions. The tests one, two and three were found reliable. However, Olayiwole's (2007) recommendation stated that, a reliability estimate can be ascertained if the reliability coefficient is high and positive.

3.5 Procedure for Data Collection

The researcher obtained a letter of introduction from the Department of Vocational and Technical Education, Faculty of Education, Ahmadu Bello University, Zaria as in appendix A. The letter was presented to the Principals of the schools (GSS Basawa, GSS Shika and GSS Kwangila) where students were used in the study. The researcher addressed the students before the pre-test was administered. The duration for the data collection lasted for period of six weeks. Data collection was done through the use of pre-test post-test control. The whole class was used for the pre-test, after the pre-test, students that had scores of 20 marks and above were selected purposively to get the ten males and ten females from the population of the students in the class. With the aid of a lesson plan and notes, students in each school were taught using the three methods. The students were exposed to the teaching methods based on the school time table that

is three times per week. Method one being cooperative method was exposed to group one students using production, method two being problem-solving was exposed to group two studentsusing production and method three being demonstration was not exposed to treatment.(see appendix C). Factors of production and types of production was taught to the groups for the second week using cooperative method for group one, problem-solving for group two (see appendix D).Skill and unskilled labour was taught to the groups for the third week using cooperative method for group one, problem-solving for group two (see appendix E). Factors that determine the level of production was taught to the groups for the fourth week using cooperative method for group one, problem-solving for group two (see appendix F). The teaching lasted for the period of four weeks. At the end of the teaching each group met three times for the period of 40 minutes.

At the end of the treatment, in the groups, Commerce Achievement Test (CAT) was administered to the students based on topics taught. The test lasted for one hour in the three schools,this was done with the help of two research assistants so as to ensure objectivity in the supervision/invigilation.Details of the lesson plan for the post-test are in appendices. C-N as well as test questions with the marking schemes O-P.

3.6 Procedure for Data Analysis

The research used, mean and standard deviation for research question one to seven. Regression was used to analyze hypotheses one to three while hypothesesfour to six was analysed using t-test and hypothesis seven was tested with ANOVA at 0.05 level of significance Decision: If the calculated value of t and F were equal or greater than the critical value, the null hypotheses were rejected because there was significant effectwhile If the calculated value of t and F wereless than the critical value, the null hypotheses were retained.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

This chapter presented the results and discussion of the data analysis for the study. The presentations were organized according to research questions and null hypotheses that guided the study. They are presented under relevant headings as follows:

Research question one: What is the effect of cooperative teaching method on performance of

Secondaryschool students in Commerce in Kaduna State?

The data collected in respect to research question one are as seen in table 3

Table 3Meanand standard deviation scores of Cooperative Teaching Methodon Performance of Senior Secondary School Students inCommerce in Kaduna state, Nigeria.

GROUP	N	$\overline{X}$	SD
Cooperative method	20	48.85	8.06
Lecture method	20	38.65	5.10

Source: Field survey, February, 2016

Table 3showed that the treatment group taught commerce with cooperative teaching method had a posttest mean score of 48.85and standard deviation of 8.06 while the control group taught commerce with lecture method had a mean score of 38.65 and standard deviation of 5.10 The result gave a mean difference of 10.02which indicated that cooperative teaching method has effect on students' performance in commerce. The low standard deviation difference (2.96) showed that the scores of students are clustered around their respective mean.

Research question two: What is the effect of problem-solving teaching method on Performance of secondary school students in Commerce in KadunaState?

The data collected in respect to research question twoare as seen in table 4.

Table 4Meanand standard deviation scores of Problem Solving Teaching Methodon Performance of Senior Secondary School Students in Commerce in Kaduna state, Nigeria

GROUP	N	$\overline{X}$	SD
Problem- solving method	20	51.20	8.67
Lecture method	20	38.65	5.10

Source: Field survey, February, 2016

Table 4showedthat problem solving method had a mean score of 51.20 and standard deviation of 8.67 in the posttest, and a mean score of 38.65 and standard deviation of 5.10 This indicated that the students performed better in the posttest which means that problem solving method has effect on the performance of students taught commerce. The low standard deviation figure of 3.57 showed that students' scores are cluster around the mean.

Research question three: What is the effect of demonstration teaching method on Performanceof secondary school students in Commerce in Kaduna State?

The data collected in respect to research question threeare as seen in table 5

Table 5Mean and standard deviation scores of Demonstration Teaching Methodon Performance of Senior Secondary School Students in Commerce in Kaduna state, Nigeria

GROUP	N	$\overline{X}$	SD
Demonstration method	20	51.65	8.73
Lecture method	20	38.65	5.10

Source: Field survey, February, 2016

Table 5showedthat demonstration method had a mean score of 51.65 and standard deviation of 8.73 in the posttest, and a mean score of 38.65 and standard deviation of 5.10. This indicated that the students performed better in the posttest which means that demonstration method has effect on the performance of students taught commerce. The low standard deviation figure of 3.63 showed that students' scores are cluster around the mean

Research question four: What is the effect of gender on the performance of secondaryschool

Studentstaught Commerce using cooperative teaching method

inKaduna State?

The data collected in respect to research question fourare as seen in table 6

Table 6 Mean and standard deviation scores of Gender on Performance of Secondary School students' taught Commerce using Cooperative Teaching Method

GENDER	N	$\overline{X}$	SD
Male	10	52.00	6.78
Female	10	45.70	8.33
Mean & SD difference		6.30	1.55

Source: Field survey, 2016

Table 6 showed that male students taught commerce with cooperative teaching method had a posttest mean score of 52.00 and standard deviation of 6.78. While, female students taught commerce with cooperative teaching method had a posttest mean score of 45.70 and standard deviation of 8.33. This gave a mean difference 6.30 between male and female students with male students having higher mean score. The low standard deviationvalue indicated that there is low variability in their mean scores. The result showed that male students taught commerce with cooperative teaching method had higher mean score than female students. Hence there is an effect attributed to gender on the performance of students taught commerce usingcooperative teaching method.

Research question five: **What is the effect of gender on the performance of secondary SchoolstudentstaughtCommerce using problem-solving teaching method in Kaduna State?**

The data collected in respect to research question five are as seen in table 7

Table 7Meanand standard deviation scores of Gender on Performance of Secondary School Students' taught Commerce using Problem Solving Teaching Method

GENDER	**N**	$\overline{X}$	**SD**
Male	10	55.00	7.02
Female	10	47.40	8.78
Mean & SD Difference		7.60	1.76

Source: Field survey, 2016

Table 7showed that male students taught commerce with problem-solving teaching method had a posttest mean score of 55.00 and standard deviation of 7.02. While, female students taught commerce with problem-solving teaching method had a posttest mean score of 47.40 and standard deviation of 8.78. This gave a mean difference 7.60 between male and female students with male students having higher mean score. The low standard deviationvalue indicated that there is low variability in their mean scores. The result showed that male students taught commerce with problem-solving teaching method had higher mean score than female students. Hence there is an effect attributed to gender on the performance of students taught commerce usingproblem-solving teaching method.

Research question six:**What is the effect of gender on the performance of secondary school Studentstaught Commerce using demonstration teaching method in Kaduna State?**

The data collected in respect to research question sixare as seen in table 8

Table 8 Mean and standard deviation scores of Genderon Performance of Secondary School Students' taught Commerce using Demonstration Teaching Method

GENDER	**N**	$\overline{X}$	**SD**
Male	10	52.50	7.78
Female	10	50.80	9.94
Mean & SD Difference		1.70	2.20

Source: Field survey, 2016

Table 8showed that male students taught commerce with demonstration teaching method had a posttest mean score of 52.50 and standard deviation of 7.78. While, female students taught commerce with demonstration teaching method had a posttest mean score of 50.80 and standard deviation of 9.94. This gave a mean difference 1.70 between male and female students with male students having higher mean score. The low standard deviationvalue indicated that there is low variability in their mean scores. The result showed that male students taught commerce with demonstration teaching method had higher mean score than female students. Hence there is an effect attributed to gender on the performance of students taught commerce usingdemonstration teaching method.

Research question seven: **What are the comparative effects of cooperative, problem-solving and demonstration teaching methods on the performance of secondary students taught Commerce in Kaduna State?**

The data collected in respect to research question sevenare as seen in table 9

Table 9 Meansand standard deviation scores PerformanceofSecondary Schools Students taught Commerceusing Cooperative, problem-Solving and Demonstration TeachingMethodsin Kaduna state, Nigeria.

GROUP	N	$\overline{X}$	SD
Cooperative method	20	48.85	8.06
Problem-solving	20	51.20	8.67
Demonstration	20	51.65	8.73

Source: Field survey, February, 2016

Table 9showedthat cooperative students (experimental group 1) had performance mean score and standard deviation of 48.85 and 8.06, respectively, Experimental group two students taught commerce with problem-solving method had performance mean score of 51.20 and standard deviation of 8.67. The control group students taught commerce with demonstration method had a mean score of 51.65 standard deviation of 8.73. The low values of standard deviation showed that students' scores do not vary much in all the groups. The result in the Table showed that demonstration group performed slightly better than both cooperative and problem-solving groups. While problem-solving method group performed slightly better than the cooperative group. This indicated that demonstration method had more positive effect on the

performance of students in commerce, followed by problem-solving method and then the cooperative method.

4.2 Test of Hypotheses

The null hypotheses for the study were tested at 0.05 level of significance and the summaries are presented in Tables 10 to 16 as follows:

1. **CooperativeTeaching Method has no significant Effect on Performanceof Secondary School Students inCommerce in Kaduna state**

The hypothesis in respect to research question one is as seen in table 10

Table 10 Regression Analysis on Performance of Secondary School Students'inCommerce using Cooperative Teaching Method in Kaduna state, Nigeria

Group	N	Mean	SD	DF	F	r	r^2	P-value
Cooperative Method	20	48.85	8.06					
				38	40.27	0.717	0.502	0.000
Lecture Method	20	38.65	5.10					

Source: Field survey, 2016

Table 10 showed the effects of cooperative teaching method on performance of secondary school students' commerce. The table have variablecoefficient (R) of 0.717 and adjusted R square of 0.502. This means that 50.2% of the variance in the students' performance is accounted for by the effects of the cooperative method. The effects of cooperative teaching method was statistically significant (DF (38) = 40.27; p=0.000). Using the unstandardized regression coefficient to determine the effects of cooperative teaching method on performance of secondary school students' commerce, it was revealed that cooperative method has statistically significant effect on performance of students in commerce(B=15.60, t=6.35).

2. **Problem-solvingTeaching Method has no significant on Performanceof Secondary School Students inCommerce in Kaduna state.**

The hypothesis in respect to research question two is as seen in table 11

Table 11 Regression Analysis on Performance of Secondary School Students 'in Commerce using Problem Solving Teaching Method in Kaduna state, Nigeria

Group	N	Mean	SD	F	r	r^2	**P-value**
Problem-solving Method	20	51.20	8.67				
				41.25	0.758	0.563	0.000
Lecture Method	20	38.65	5.10				

Source: Field survey, 2016

Table 11 showed the effects of problem-solving teaching method on performance of secondary school students' commerce.The table have variable coefficient (R) of 0.758andadjusted R square of 0.563. This means that 56.3% of the variance in the students' performance is accounted for by the effects of the Problem-solving method. The effects of problem-solving teaching method was statistically significant 41.25; p=0.000). Using the unstandardized regression coefficient to determine the effects of problem-solving teaching method on performance of secondary school students' commerce, it was revealed that problem-solving method has statistically significant effect on performance of students in commerce(B=18.40, t=7.16).

3. Demonstration teaching method has no significant on Performance of Secondary School Students inCommerce in Kaduna state.

The hypothesis in respect to research question three is as seen in table 12

Table 12 Regression Analysis on Performance of Secondary School Studentsin Commerce using Demonstration Teaching Method in Kaduna state, Nigeria

Group	N	Mean	SD	F	r	r^2	P-value
Demonstration Method	20	51.65	8.73				
				49.19	0.751	0.553	0.000
Lecture Method	20	38.65	5.10				

Source: Field survey, 2016

Table 12showed the effects of demonstration teaching method on performance of secondary school students' commerce.The table have variable coefficient (r) of 0.751 and a adjusted R square of 0.553. This means that 55.3% of the variance in the students' performance is accounted for by the effects of the demonstration method. The effects of demonstration teaching method was statistically significant = 49.19; p=0.000). Using the unstandardized regression coefficient to determine the effects of demonstration teaching method on performance of secondary school students' commerce, it was revealed that demonstration method has statistically significant effect on performance of students in commerce(B=17.95, t=7.01).

4. **There is no significant Effect of Gender on the Performance of Secondary School Students taughtin Commerce using Cooperative Teaching Method in Kaduna State.**

The hypothesis in respect to research question four is as seen in table 13

Table 13T-test Difference on the Performance between Male and Female Students incommerce using Cooperative Teaching Methodin Kaduna state, Nigeria.

Gender	N	Mean	SD	t-cal	t	Df	p-value
Male	10	52.00	6.77	1.86	1.73	18	0.080
Female	10	47.70	8.33				

Source: Field survey, January, 2016

Table 13 revealed that there are 20 male and female students taught commerce using cooperative. The male had mean score of 52.00 and standard deviation of 6.77 while the female had mean score of 47.70 and standard deviation of 8.33. The t-cal was 1.86 and t-crit is 1.73 DF(18) while p-value is 0.080 signified that the Null hypothesis which stated that There is no significant effect of gender on the performance of secondary school students taught commerce using cooperative method in Kaduna State was retained. This mean that there was no significant effect of gender on the performance of secondary school students taught commerce using cooperative method in Kaduna State.

5. **There is no significant Effect of Gender on the Performance of Secondary School Students taughtin Commerce using Problem Solving Teaching Method in Kaduna State.**

The hypothesis in respect to research question five is as seen in table 14

Table 14T-test difference on the performance between male and female students in commerce using Problem -Solving Teachingmethod in Kaduna state, Nigeria.

Gender	N	Mean	SD	t-cal	t	Df	p-value
Male	10	55.00	7.02	2.14	2.03	18	0.080
Female	10	47.40	8.78				

Source: Field survey, January, 2016 P>0.05

Table 14 revealed that there are 20 male and female students taught commerce using cooperative. The male had mean score of 55.00 and standard deviation of 7.02 while the female had mean score of 47.40 and standard deviation of 8.78. The t-cal was 2.14 and t-crit is 2.03 DF (18) while p-value is 0.080signified that the Null hypothesis which stated that there is no significant effect of gender on the performance of secondary school students taught commerce using problem solving method in Kaduna State was retained. This mean that there was no significant effect of gender on the performance of secondary school students taught commerce using problem solving method in Kaduna State.

6. **There is no significant Effect of Gender on Performance of Secondary School Students taughtinCommerce using Demonstration Teaching Method in Kaduna State.**

The hypothesis in respect to research question six is as seen in table 15

Table 15 T-test Difference on the Performance between Male and Female Students in Commerce using Demonstration Teaching Methodin Kaduna state, Nigeria.

Gender	N	Mean	SD	t-cal	t	Df	p-value
Male	10	52.50	7.78	4.26	2.73	18	0.080
Female	10	50.80	9.94				

Source: Field survey, January, 2016

Table 15 revealed that there are 20 male and female students taught commerce using demonstration method. The male had mean score of 52.50 and standard deviation of 7.78 while the female had mean score of 50.80 and standard deviation of 9.94. The t-cal was 4.26 and t-crit is 2.73 while p-value is 0.080 signified that the Null hypothesis which stated that there is no significant effect of gender on performance of secondary school students taught Commerce using demonstration method in Kaduna State was retained. This means that there was no significant effect of gender on the performance of secondary school students taught commerce using demonstration method in Kaduna State.

7. There is no Difference among the Effects of Cooperative, Problem-Solving and Demonstration teaching Methods on the Performance of Secondary School Students in Commerce inKaduna State.

The hypothesis in respect to research question seven is as seen in table 16

Table 16 One-way Analysis of Variance on the difference between the performances of Students in Cooperative, Problem-Solving and Demonstration Teaching Methods in Kaduna state, Nigeria.

Group	N	Mean	SD	F-cal	F-crit	Df	p-value
Experimental Group One	20	45.22	9.04				
				0.627	3.15	2	0.000
Experimental Group Two	20	72.11	9.89				
						57	
Control Group	20	51.65	8.73				
Total	**60**	**168.98**	**27.66**			**59**	

Source: Field survey, January, 2016

Table 16 revealed the summary of one-way analysis of variance of thedifference between the performances of students taught cooperative, problem-solving anddemonstration there are 60 students both male and female were taught commerce using cooperative, problem-solving and demonstration method. The experimental group one had mean score of 45.22 and standard deviation of 9.04 while experimental group two had mean score 72.11 and standard deviation of 9.89 control group had mean score of 51.65 and standard deviation of 8.73 The F-cal was 0.627 while F crit3.15 and p- value 000 signified that the Null hypothesis which stated There is no difference among the effects of cooperative, problem-solving and demonstration Methods on the performance of secondary school students in commerce in Kaduna is rejected. This means that there is significant different among the experimental group one, experimental group two and the control group in the teaching of Commerce in the secondary schools in Kaduna State.

The following are the major findings:

1. There was significant difference in the performance of student's between the Cooperative and lecture method of teaching learning ofcommerce in the secondary school. (t-cal = 4.14) and (t-crit = 2.09). Since the calculated value of t is greater than the critical value, the null hypothesis that stated that there is no significant effect of cooperative method on performance of secondary school students in commerce in Kaduna State was therefore rejected.
2. There was significant difference in the performance of student'sbetween the Problem-solving and lecture method of teaching learning of commerce in the secondary school (t-cal = 5.10) and (t-crit = 2.09). Since the calculated value of t is greater than the critical value, the null hypothesis that stated that there is no significant effect of problem solving method on performance of secondary school students in commerce in Kaduna State was therefore rejected.
3. There was significant difference between in the performance of student'sbetween Demonstration and lecture teaching learning method of commerce in the secondary school. (t-cal = 6.68) and (t-crit = 2.09). Since the calculated value of t is greater than the critical value, the null hypothesis that stated that there is no significant effect of demonstration method on performance of secondary school students in commerce in Kaduna State was therefore rejected
4. There was no significant effect of gender on the performance of secondary school students taught in commerce using cooperative method in Kaduna State. t-cal was 1.73 and t-crit is 1.73 signified that the Null hypothesis which stated that there is no significant

effect of gender on the performance of secondary school students taught commerce using cooperative method in Kaduna State was therefore retained. .

5. There was no significant effect of gender on the performance of secondary school students taught in commerce using problem solving method in Kaduna State.t-cal was 2.14 and t-crit is 2.03 signified that the Null hypothesis which stated that there is no significant effect of gender on the performance of secondary school students taught commerce using problem solving method in Kaduna State was therefore retained.
6. There was no significant effect of gender on the performance of secondary school students taughtin commerce using demonstration method in Kaduna State t-cal was .426 and t-crit is 2.73 signified that the Null hypothesis which stated that there is no significant effect of gender on performance of secondary school students taught Commerce using demonstration method in Kaduna State was therefore retained.
7. There is significant different among the experimental group one, experimental group two and the control group in the teaching of Commerce in the secondary schools in Kaduna State. The F-cal was .627 while F crit3.15 and p- value 000 signified that the Null hypothesis which stated there is no difference among the effects of cooperative, problem-solving and demonstration Methods on the performance of secondary school students in commerce in Kaduna was rejected.

4.3 Discussion of Major Findings

This study was conducted to determine the effects of cooperative, problem solving and demonstration methods of teaching on the academic performance of secondary school students in Commerce in Kaduna state. The research question asked that, what is the effect of cooperative method of teaching on the performance of secondary school students taught in Commerce in Kaduna State? The hypothesis that assume that,there is no significant effect of cooperative method on performance of secondary school students in commerce in Kaduna State

The study found out that there was significant effects on the scores of students taught commerce using cooperative method and those taught using lecture teaching method. The cooperative scores are better than the lecture teaching method scores. Meaning that cooperative method is an effective method in improving the academic performance of secondary school students in Commerce. This is in line with the findings of Rosini (2000) who conducted a research on the effects of cooperative methods on achievement, retention, and attitudes of Home Economics students in Ahmadu Bello University, Zaria. The findings of the study states also that, cooperative learning was found to be more effective than non-cooperative learning group with respect to Home Economics students' achievement and retention.

The research question asked that what is the effect of problem-solving method on performance of secondary school students in Commerce in Kaduna State? The hypothesis assumed there is no significant effect of problem-solving method on performance of secondary school students in commerce in Kaduna state. The study found out that there was significant effects on the performance of students taught commerce using problem-solving and lecture teaching methods. Meaning that students taught using problem-solving performed better than

those taught using lecture methodin the secondary schools inKaduna state. This findings is in line with Tsoho (2011) who conducted a research on effects of problem-solving and student-centred teaching strategies on students Geometry performance and retention in junior secondary schools in Kano State. The findings of the study include that, problem-solving group performed better than the other groups.

The research question asked that what is the effect of demonstration method on performance of secondary school students in Commerce in Kaduna State? The hypothesis that assumed thatthere is no significant effect of demonstration method on performance of secondary school Students in commerce in Kaduna state. The study found out that there was significant effect on the performance of students taught commerce using demonstration and lecture teaching methods. Meaning that scores of demonstration are better the scores of lecture teaching method. Meaning that demonstration method is more effective than the lecture teaching method in the teaching of Commerce in the secondary schools in Kaduna state. This findings is in line with Okoli (2011) who carried out a study on the effect of using demonstration methods on students' performance in Financial Accounting, the study was on secondary schools students in Gombe State The findings of the study includes that there was relative effect on the performance of students using demonstration method in the teaching of financial Accounting better than the conventional group in performance.

The research question asked that what is the effect of gender on the performance of secondary school students taught in Commerce using cooperative method in Kaduna State? The hypothesis that assumed there is no significant effect of gender on the performance of secondary school students taught commerce using cooperative method in Kaduna State. The study found that there was no significant effect of gender on the performance of secondary school students

taught commerce using cooperative method in Kaduna State this means that gender has no effect on the performance of students taught Commerce using cooperative method at the secondary school. This findings is in line with Kadiri (2004) who carried out a study on the effects of interactive teaching techniques and strategies on junior secondary school achievement in Social Studies in Kano State. Findings of the study stood as there were no behavioural teaching techniques and strategies in the teaching of Social Study at the junior secondary schools in Kano State.

The research question asked that what is the effect of gender on the performance of secondary school students, taught in Commerce using problem-solving in Kaduna State? The hypothesis that assumedthere is no significant effect of gender on the performance of secondary school students taught commerce using problem solving method in Kaduna State. The study found out that there was no significant effect of gender on the performance of secondary school students taught commerce using problem solving method in Kaduna. This means that gender has no effect on the performance of students taught Commerce at the secondary school using problem-solving. This findings is in line with Audu (1996) conducted a research on the teacher perception of problem-solving method in teaching Social Studies, the affecting domain in Kaduna State. One of the findings states that there is no behavioural method of problem-solving in lecture method of teaching Social Studies in the secondary schools. Another finding reveals that there is no single approach in the teaching of Social Studies in the secondary schools. The study found out that there was no significant effect of gender on the performance of secondary school students taught commerce using demonstration method in Kaduna State. This means that gender has no effect on the performance of students taught Commerce at the secondary school using demonstration method.

The research question asked that what is the effect of gender on performance of secondary school students taught in Commerce using demonstration method in Kaduna State? The hypothesis that assumed there is no significant effect of gender on performance of secondary school students taught Commerce using demonstration method in Kaduna State. The study found out that there was no significant effect of gender on the performance of secondary school students taught commerce using demonstration method in Kaduna. This findings is in line with Okoli (2011) who found that there was no significant effect of gender on the performance of secondary school students taught Financial Accounting using demonstration method in Gombe State.

The research question asked that what are the comparative effects of Cooperative, Problem-solving and Demonstration on the performance of secondary students in Commerce in Kaduna State? The hypothesis that assumed there is no difference among the effects of cooperative, problem-solving and demonstration Methods on the performance of secondary school students in commerce in Kaduna State. The study found out that there is significant different among the experimental group one, experimental group two and the control group in the teaching of Commerce in the secondary schools in Kaduna This means that out of the three methods used in this study, cooperative method proved to be the best. This finding supports the earlier findings of Slavin (2007) who found that cooperative learning results in greater mastery of a subject than individual learning does. Slavin stated that cooperative method greatly improved the performance of students in commerce than the problem solving method. Contrary to this finding, Springer (2009) stated that the vast majority of studies about cooperative method are with children in primary and secondary schools and that it did not improve the performance of the pupils in his study. On the other hand, Kelly and Fetherston (2008) reported that the

findings of the effect of cooperative method within higher education are quite different from the findings at the primary and secondary levels of education, because cooperative method has been found to have positive effect on the achievement of students in higher institutions. This clearly indicated that cooperative method is an effective method at higher education level especially at polytechnics, Colleges and University level.

The null hypothesis tested for this revealed that cooperative method have statistically significant effect on the academic performance of students in Commerce. The implication of this finding is that cooperative method is more effective than problem solving and demonstration methods in improving the performance of students in Commerce. This findings is also in line with Adeyemi (2005) who carried out a study on the effects of cooperative learning and problem-solving strategy on junior secondary school students' achievement in social studies in Osun State. The findings of the study includes, among others, that cooperative learning group had a higher adjusted post-test mean, which means that the cooperative learning group performed better.

This finding is also similar to the finding of Israel, Shachar and Fischer (2012) who conducted a study on the effect of cooperative learning on the students' achievement in social science and reported a statistically significant main effect of Cooperative learning compared to the control groups on student achievement. A possible explanation to these findings could be that in cooperative method students' benefit from five elements of cooperative method: positive interdependence, individual accountability, promote interaction, group processing, and team or social skills. Similarly, in the views of Springer, Stanne, and Donovan (2009), Bowen (2010), and Scott, Tolson, Schroeder, Lee, Huang, Hu, and Bentz, (2011) Cooperative method has a positive effect on student achievement in education.

The study found out that Problem solving method is effective in improving the performance of students in commerce but not as effective as the cooperative method. This implied that problem solving method is better in improving students' academic performance than the demonstration method. This finding is similar to the finding of Eng (2001) who reported that problem solving, undergraduates performed as well and sometimes better in examinations according to faculties' evaluations. This means that problem solving is also an effective method of teaching in the secondary schools. This finding supported other reports on the effectiveness of problem solving method. Some of these studies investigated the effectiveness of implementation of problem solving in engineering education (Gallagher2012) and in law education (Stephien, Sher, &Workman, 2012). The null hypothesis tested for this revealed that problem solving method of teaching had statistically significant effect on the academic performance of students in Commerce. This finding supports the earlier finding of Vernon and Blake (2009) conducted a meta-analysis study for 28 studies to compare problem solving method with traditional methods in medical education and they pointed out that the superiority of the problem solving method over the traditional methods with respect to students' clinical performance, attitudes and opinions about their programme.

The study found out that significant effects on the performance of male and female in commerce at the secondary schools using Cooperative method in Kaduna state is gender friendly. Irrespective of gender, both male and female students equally benefited from the use of this method. This findings is in conformity with many findings reported by Amason and Yusuf (2011) investigated on the effect of cooperative instructional strategy on students' performance in Social Studies to find out other things whether or not the use of Cooperative instructional strategy has any significant gender effect on academic performance. The study found out that

there was no significant difference in the performance of male and female students taught using cooperative instructional strategy. Another study, Oludipe (2012) investigated on the effects of cooperative computer assisted learning on male and female student's performance in geography with the result showed no significant gender related difference. The cooperative learning strategy is therefore gender friendly.

The study found out that significant effects on the performance of male and female in commerce at the secondary schools using problem solving method in Kaduna state is gender friendly. This is in conformity with the findings of Mutuah (2014) investigated on the Cooperative learning and Problem solving on the junior secondary schools Business studies to find out other things whether or not the use of cooperative and problem solving has any gender effect on academic performance of male and female students at the Junior secondary schools. The study found there was no significant difference in the performance of male and female students taught using cooperative and problem solving method. The implication is that both the cooperative and problem solving method enhanced good relationships among gender in academic performance of students in the secondary schools. In a related study Haliru (2015) effect of Cooperative learning strategy on geography students' academic performance in the senior secondary schools to find out other things whether or not the use of cooperative learning strategy has any gender effect on academic performance of male and female students at the Junior secondary schools. The study found out that there was no significant difference in the performance of male and female students taught using cooperative learning strategy. Rather, the method creates competitions among groups in the learning process which paradoxically improves students' performance in the learning and mastering of the subject content at the secondary schools.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter comprised the summary, conclusion and recommendations of the research.The chapter include the following sub-headings:

5.1 Summary

5.2 Contribution to Knowledge

5.3 Conclusion

5.4Recommendations

5.1 Summary

The study was centredon the effects of cooperative, Problem solving and Demonstration methods on performance of secondary school students in commerce in Kaduna State, Nigeria. The main objective of the study was to determine the effects of cooperative, problem solving and demonstration methods on performance of secondary school students in commerce in Kaduna State, Nigeria

The study has seven specific objectives among which were, to determine the effect of cooperative method on the performance of secondary school students in commerce in Kaduna State. In line with the specific objectives seven research questions were raised one of which included, what is the effect of cooperative method on the performance of secondary school students in commerce in Kaduna State? The thesis also had seven hypotheses one of which

included, there is no significant effect of cooperative method on performance of secondary school students in commerce in Kaduna State.

Quasi experimental design was adopted, as research method, the population for the study was 6651 SSI students from which a sample of sixty students (60) were selected through purposive sampling techniques. The selected students were assigned to three methods which was grouped as (experimental group one, experimental group two and experimental group three).the instrument used for data collection was commerce achievement test (CAT). The data collected were analyzed using mean and standard deviation. The null hypotheses were tested using independent t-test and Analysis of covariance at 0.05 level of significance.

The following were the major findings of the study:

1. There was significant difference between the mean performances of student taught Commerce using cooperative method and lecture teaching method. This indicated that the students performed in the cooperative method than lecture method which means that cooperative method has effect on the performance of students taught commerce with the mean score of 48.85 and standard deviation of 8.06 in the posttest. The low standard deviation figure indicated that students' scores are cluster around the mean.
2. There was significant difference between the mean performances of student taught Commerce using problem solving method and lecture teaching method. This indicated that the students performed better inproblem-solving method than lecture teaching method which means that problem solving method has effect on the performance of students taught commerce with the mean score of 51.20 and standard deviation of 8.67.

The low standard deviation figure indicated that students' scores are cluster around the mean.

3. There was significance difference between the mean performances of student taught Commerce using demonstration method and lecture teaching method. This indicated that the students performed better in the demonstration than the lecture teaching method which means that demonstration method has effect on the performance of students taught commerce.51.65 and standard deviation of 8.73 in lecture teaching method. The low standard deviation figure indicated that students' scores are cluster around the mean.

4. Gender had significant difference between the mean performances of male and female students taught Commerce using posttest on Cooperativeteaching method with the mean score of 52.00 and 6.78 for mean and standard deviation respectively. Female students in the group had mean score of 45.70 and standard deviation of 8.33. This indicated that male students in experimental group one (Cooperativeteaching method) performed better than the female students.
5. Gender had significant difference between the mean performances of male and female students taught Commerce using problem solving method with the mean score of 55.00 and 7.02 for mean and standard deviation respectively. Female students in the group had mean score of 47.40 and standard deviation of 8.78. This indicated that male students in experimental group two (problem solving method) performed better than the female students.
6. Gender had significantdifference between the mean performances of male and female students taught Commerce using Demonstration method with the mean score of 52.50 and 7.78 for mean and standard deviation respectively. Female students in the group had

mean score of 50.80 and standard deviation of 9.94. This indicated that male students in experimental group three (Demonstration method) performed better than the female students.

7. There was significant difference between the mean performances of male and female students taught Commerce using Cooperative, problem solving and demonstration teaching method with the mean score of 48.85 and 8.06 on (experimental group 1), Experimental group two students taught commerce with problem-solvingteaching method had performance mean score of 51.20 and standard deviation of 8.67. The control group students taught commerce with Demonstration method had a mean score of 51.65 standard deviation of 8.73, the low values of standard deviation showed that students' scores do not vary much in all the groups. The result showed that Demonstration group performed slightly better than both cooperative and problem-solving groups. While problem-solving teaching method group performed slightly better than the cooperative group. This indicated that demonstration teaching method had more positive effect on the performance of students in commerce at the secondary schools, followed by problem-solving teaching method and then the cooperative teaching method.

5.2 Contribution to Knowledge

1. Cooperative teaching method as a collaborative efforts is considered appropriate and better than the predominant lecture teaching method in the teaching of Commerce in the Secondary Schools sincethe effect of students performance on the experiment group differs on the mean scores.(p-value)
2. Problem-Solving teaching methods as a procedures in use to prepare individual for future or real life issues is considered appropriate and better in exploring students into

real life issues than the predominant lecture teaching method in the teaching of Commerce in the Secondary Schools since the effect of students performance on the experiment group differs on the mean scores.(p-value)

3. Demonstration teaching method as a method involving telling and showing how to do or perform an operation is considered appropriate and better than the predominant lecture teaching method in the teaching of Commerce in the Secondary Schools sincethe effect of student's performance on the experiment group differs on the mean scores..(p-value)
4. Gender beingattitudes, feelings and behaviours in the learning outcome of students showed that male student's performance in commerce at the secondary school is better in all the teaching methods introduced in the experimental groups, hence the means scores of Female performance are lower than the Male scores (p-value)

5.3 Conclusion

Based on the findings of the study, it was concluded that students' performance are better in cooperative than problem solving and demonstration teaching method in the teaching learning of commerce in the secondary schools. Lecturemethod being a method that is mostly in use at the secondary schools it means that the poor performance of students in commerce is no longer surprise. Consequently, it means that their performance in other subjects at the secondary schools will be affected and which can be translated to poor performance in academic institutions of higher learning. Again, the methods was found to be gender friendly as the result from the test of hypotheses showed no significant differences between the performance of male and female students in the learning of commerce at the secondary schools. Therefore, theeffect couldbe that there is an increase in the performance of students

in the secondary schools and even tertiary institutions of learning in Commerce and other related subjects.

5.4 Recommendations

Based on the findings and conclusions, the following recommendations are made:

1. Teachers at the senior secondary schools where Commerce is taught should incorporate cooperative, problem-solving and demonstration method in their teaching of commerce to improve students' performance.
2. The teachers of commerce in the senior secondary schools of Kaduna stateshould beencouraged toadopt team work in the study of the subject.
3. The teachers should engage students to the search for solutions in their day to day learning of commerce at the secondary school level.
4. Students should ensure full participation in the learning of commerce at the secondary school level. This can be achieved successfully through the effort of commerce teachers engaging them.
5. The teachers of commerce should ensure the male and female students work together in the learning of commerce hence gender friendly has no significant difference in the learning of commerce at the secondary school from the findings of this research.

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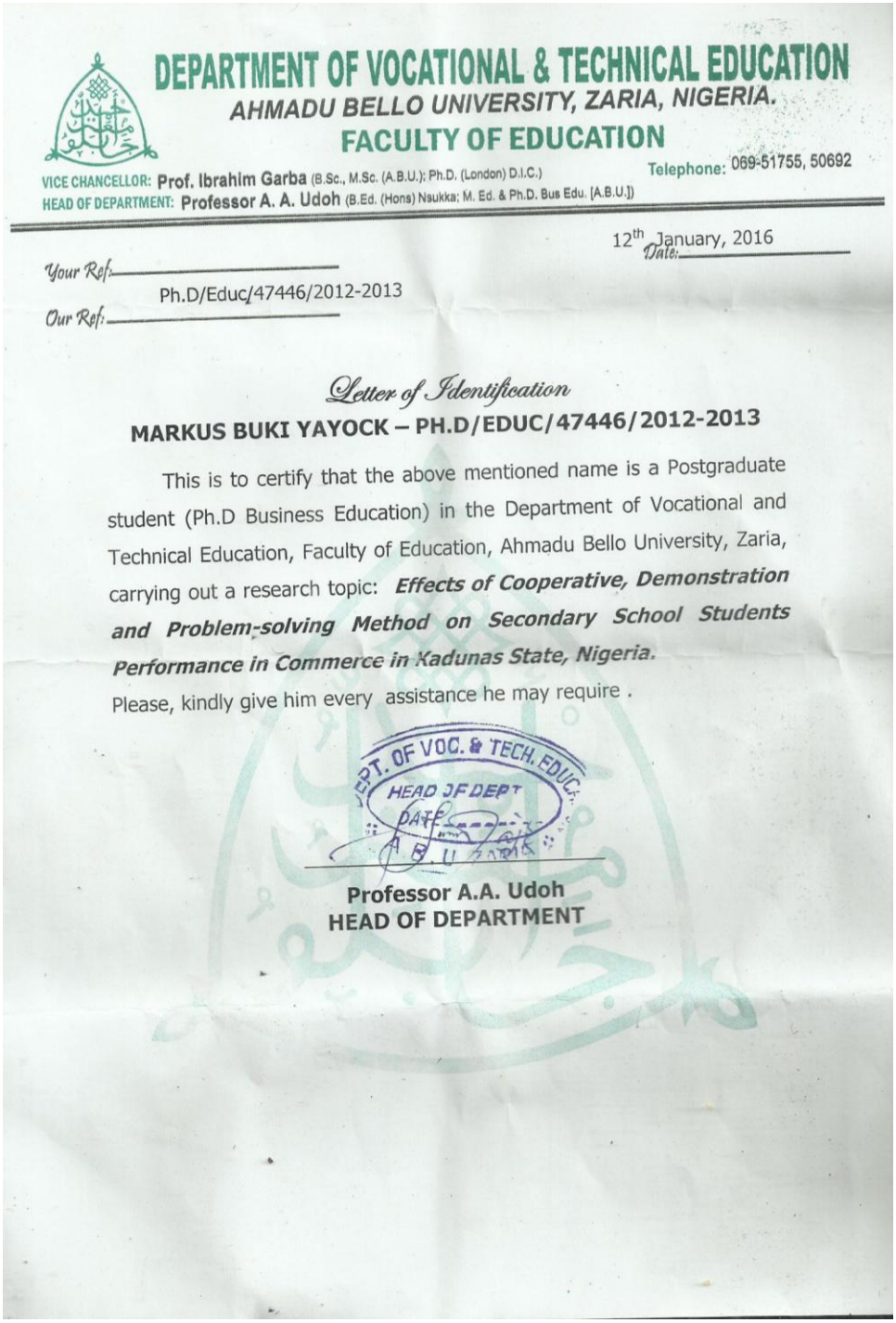
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. APPENDIX A



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.])

Your Ref: _____ Date: 12th January, 2016
Our Ref: Ph.D/Educ/47446/2012-2013

Letter of Identification

MARKUS BUKI YAYOCK – PH.D/EDUC/47446/2012-2013

This is to certify that the above mentioned name is a Postgraduate student (Ph.D Business Education) in the Department of Vocational and Technical Education, Faculty of Education, Ahmadu Bello University, Zaria, carrying out a research topic: ***Effects of Cooperative, Demonstration and Problem-solving Method on Secondary School Students Performance in Commerce in Kadunas State, Nigeria.***

Please, kindly give him every assistance he may require .

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

Professor A.A. Udoh
HEAD OF DEPARTMENT

APPENDIX B

SCHOOLS NAMES IN GIWA ZONAL EDUCATION KADUNA STATE

1. GOVERNMENT SECONDARY SCHOOL BASAWA (SNR)
2. GOVERNMENT GIRLS SECONDARY SCHOOL SAMARU (SNR)
3. GOVERNMENT SECONDARY SCHOOL BOMO (SNR)
4. Dr. SHEHU GOVERNMENT SECONDARY SCHOOL GIWA
5. YUSUF ABOKI SECONDARY SCHOOL SHIKA
6. GOVERNMENT SECONDARY SCHOOL KWANGILA (SNR)
7. GOVERNMENT SECONDARY SCHOOL HUKUYI (SNR)
8. GOVERNMENT SECONDARY SCHOOL JAMA'A
9. GOVERNMENT SECONDARY SCHOOL FATIKA
10. GOVERNMENT SECONDARY SCHOOL GIWA
11. GOVERNMENT SECONDARY SCHOOL GANGARA
12. GOVERNMENT SECONDARY SCHOOL YAKAWADA
13. GOVERNMENT JUNIOR SECONDARY SCHOOL K/ GIWA
14. GOVERNMENT JUNIOR SECONDARY SCHOOL GALADIMAWA
15. GOVERNMENT SECONDARY SCHOOL KAYA
16. GOVERNMENT JUNIOR SECONDARY SCHOOL KIDANDAN
17. GOVERNMENT JUNIOR SECONDARY SCHOOL YAN-SARKI
18. GOVERNMENT JUNIOR SECONDARY SCHOOL BASAWA
19. GOVERNMENT JUNIOR SECONDARY SCHOOL BOMO
20. GGOVERNMENT GIRLS JUNIOR SECONDARY SCHOOL SAMARU
21. GOVERNMENT JUNIOR SECONDARY SCHOOL MARABA GUGA
22. GOVERNMENT JUNIOR SECONDARY SCHOOL TABANSANI
23. GOVERNMENT JUNIOR SECONDARY SCHOOL KWANGILA
24. GOVERNMENT JUNIOR SECONDARY SCHOOL SHIKA
25. GOVERNMENT JUNIOR SECONDARY SCHOOL JAMA'A
26. GOVERNMENT JUNIOR SECONDARY SCHOOL HUKUYI
27. GOVERNMENT SECONDARY SCHOOL KUDAN
28. GOVERNMENT SECONDARY SCHOOL WAZATA
29. GOVERNMENT JUNIOR SECONDARY SCHOOL KUDAN
30. GOVERNMENT JUNIOR SECONDARY SCHOOL IYATAWA
31. GOVERNMENT SECONDARY SCHOOL SAKADADI
32. GOVERNMENT JUNIOR SECONDARY SCHOOL SAKADADI
33. GOVERNMENT SECONDARY SCHOOL DOKA KUDAN

APPENDIX C

COOPERATIVE METHOD OF TEACHING COMMERCE LESSON PLAN I

Week 1

Date:-

School: GSS Basawa

Subject: Commerce

Topic: production

Class: SSI

Time: 11:00 -11:40

Duration: 40 Minutes

General Objective: At the end of the topic, students should be able to explain production correctly and give examples

Behavioural Objective: At the end of the lesson, students should be able to: define production,

differentiate between direct and indirect production.

Previous Knowledge: The students have experience of producing products in their own way before being to the school.

TEACHING AIDS:

Materials e.g. Chart and Textbook

Introduction: The lesson will be introduced by the teacher in their heterogeneous groups. These will be classify into five group in the class through the following headings:

i. What is production?
ii. Differentiate between direct and indirect productions?

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

Step I.The teacher activity: The teacher presents the lesson by assigning group leaders in their heterogeneous groups and guiding them on how to go about in their groups stating with one to the last question in their respective groups. What is production?

Step II. The students' activity: The Students' leader presents the question to the members contributions while the teacher with the research assistant supervising heterogeneous groups in the class: What is production?

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Step III. The students' activity: The students' leader presents the question to the members' contributions while the teacher with the research assistant supervising heterogeneous groups in the class. Differentiate between direct and indirect productions?

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EVALUATION: The teacher asks the following questions.

i. What is production?
ii. What is direct production?
iii. What is indirect production?

CONCLUSION: The teacher concludes the lesson by summarising the main points of the lesson.

ASSIGNMENT: Student will be asked to read more on factors of production.

APPENDIX D

COOPERATIVE METHOD OF TEACHING COMMERCE LESSON PLAN II

Week 2

Date:-

School: GSS Basawa

Subject: Commerce

Topic: Factors of production and types of production.

Class: SSI

Time: 11:00 -11:40

Duration: 40 Minutes

General Objective: At the end of the topic, students should be able to state factors of production and the types of production.

Behavioural Objective: At the end of the lesson, students should be able to list at Least two factors or identify two types of production and explain.

Previous Knowledge: the students have experience on the factors of production and the types of production in their various areas.

TEACHING AIDS:

Materials e.g. Chart and Textbook.

Introduction: The lesson will be introduced by the teacher in their heterogeneous groups. These will be classify into five group in the class through the following headings:

i. What are the factors of production?

ii. What are the types of production?

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

Step I The teacher activity: The teacher presents the lesson by assigning group leaders in their heterogeneous groups and guiding them on how to go about in their groups stating with one to the last question in their respective groups. What is direct production?

Step II The students' leader presents the question to the members' contributions while the teacher with the research assistant supervising heterogeneous groups in the class. What are the factors of production?

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Step III. The students' leader presents the question to the members' inputs: explain the following

types of production:

i. Primary production
ii. Secondary production
iii. Tertiary production

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EVALUATIO: The teacher asks the following questions

i. Name three factors of production
ii. Mention two types of production and explain one

CONCLUSION: The teacher concludes the lesson by summarising the main points of the lesson.

ASSIGNMENT: The students will be asked to read more about the difference between skilled and unskilled labour.

APPENDIX E

COOPERATIVE METHOD OF TEACHING COMMERCE LESSON PLAN III

Week 3

Date:-

School: GSS Basawa

Subject: Commerce

Topic: Skill and unskilled labour

Class: SSI

Time: 11:00 -11:40

Duration: 40 Minutes

General Objective: At the end of the topic, students should be able to to differentiate between skilled and unskilled labour.

Behavioural Objective: At the end of the lesson, students should be able to identify the skilled and unskilled labour.

Previous Knowledge: the students have experience in many skills learned on their own.

TEACHING AIDS:

Materials e.g. Chart and Textbook.

Introduction: The lesson will be introduced by the teacher in their heterogeneous groups. These will be classify into five group in the class through the following headings:

- **i.** Differentiate between the skill and unskilled labour in the production process?
- **ii.** Identify the skill and unskilled labour in Nigeria.

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

Step I. The teacher activity: The teacher presents the lesson by assigning group leaders in their heterogeneous groups and guiding them on how to go about in their groups starting with one to the last question in their respective groups. Differentiate between the skill and unskilled labour in the production process?

Step IIthe students' activity: The students' leader presents the question to the

members'contributions while the teacher with the research assistant supervising heterogeneous groups in the class. Differentiate between the skill and unskilled labour in the production process?

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iii. **Step III.The students' activity:** The student's leader presents the question to the members' contributions while the teacher with the research assistant supervising heterogeneous groups in the class. Explain secondary production. Identify the skill and unskilled labour in Nigeria.

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EVALUATION: The teacher asks the following questions

i. Who is a skilled labourer?
ii. Who is unskilled labourer?

CONCLUSION: The teacher concludes, by summarising the main points of the lesson

ASSIGNMENT; Students will be asks to read more on factors that determines the level of Production.

APPENDIX F

COOPERATIVE METHOD OF TEACHING COMMERCE LESSON PLAN IV

Week 4

Date:-

School: GSS Basawa

Subject: Commerce

Topic: Factors that determine the level of production

Class: SSI

Time: 11:00 -11:40

Duration: 40 Minutes

General Objective: At the end of the topic, students should be able to name factors that determine the level of production.

Behavioural Objective: At the end of the lesson, students should be able to explain at least three factors that determine the level of production.

Previous Knowledge: the students have experience on how to determine production in their level.

TEACHING AIDS:

Materials e.g. Chart and Textbook

Introduction: The lesson will be introduced by the teacher in their heterogeneous groups. These will be classify into five group in the class through the following headings:

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

Step I. The teacher activity: The teacher presents the lesson by assigning group leaders in their heterogeneous groups and guiding them on how to go about in their groups stating with one to the last question in their respective groups.

i. List the factors that determine the level of production.
ii. Explain five factors that determine the level of production.
iii. **The students' activity:** The students' leader presents the question to the members' contributions while the teacher with the research assistant supervising heterogeneous groups in the class. List the factors that determine the level of production

………
……
……
…….....

Step III. The students' activity: The students' leader presents the question to the members' contributions while the teacher with the research assistant supervising heterogeneous groups in the class. Explain five factors that determine the level of production.

………
……
……
……
……
……
……

EVALUATION: The teacher asks the following questions

i. Name five factors that determine the level of production
ii. Explain two factors that determine the level of production

CONCLUSION: The teacher concludes the lesson by summarising the main points of the lesson.

APPENDIX G

PROBLEM-SOLVING METHOD OF TEACHING COMMERCE LESSON PLAN I

Week 1

Date:-

School: GSS SHIKA

Subject: Commerce

Topic: Production

Class: SSI

Time: 11:00 -11:40

Duration: 40 Minutes

General Objective: At the end of the topic, students should be able to define production

Behavioural Objective: At the end of the lesson, students should be able to state and comprehend the meaning of production.

Previous Knowledge: The students have known how to source information on their own

TEACHING AIDS:

Materials e.g Chart and Textbook

Introduction: The researcher will explain to the students what is expected from the students

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

Step I. Student activity: Define production with examples.

……
……

……
……

Step II.Student activity: Explain the difference between direct and indirect production.

……
……
……
……
……

Step III.Student activity States each three examples of direct and indirect production.

……
……
……
……
……
……

EVALUTION: The researcher provide answers to the questions above.

CONCLUSION: The researcher asks students to ask questions on the difficult areas.

APPENDIX H

PROBLEM-SOLVING METHOD OF TEACHING COMMERCE LESSON PLAN II

Week 2

Date:-

School: GSS SHIKA

Subject: Commerce

Topic: Factors of production and types of production

Class: SSI

Time: 11:00 -11:40

Duration: 40 Minutes

General Objective: At the end of the topic, students should be able name the factors of production and the types of production.

Behavioural Objective: At the end of the lesson, students should be able to differentiate between the factors of production and the types of production.

Previous Knowledge: Students have known the factors of production and the types of production on their own ways.

TEACHING AIDS:

Materials e.g. Chart and Textbook

Introduction: The researcher guide the students on how to answer the questions on their own.

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

Step I.Students activity: States four factors of production.

……
……
……

Step II Student activity: List three types of production.

……
……
……

Step III: **Students activity:** Differentiate between labour and capital.

……
……
……
……
……

Step IV Student activity: what is the difference between land and entrepreneur?

……
……
……
……

Step V Student activity: Explain two types of production.

……
……
……

EVALUATION: The researcher provide answers to the questions above

CONCLUSION: The researcher asks students to ask questions on the difficult areas.

APPENDIX I

PROBLEM-SOLVING METHOD OF TEACHING COMMERCE LESSON PLAN III

Week 3

Date:-

School: GSS SHIKA

Subject: Commerce

Topic: Skill and unskilled labour

Class: SSI

Time: 11:00 -11:40

Duration: 40 Minutes

General Objective: At the end of the topic, students should be able to differentiate between skill and unskilled labour.

Behavioural Objective: At the end of the lesson, students should be able to: identify the skill labour and unskilled labour.

Previous Knowledge: The students on their own have the experience of skills in their performances

TEACHING AIDS:

Materials e.g. Chart and Textbook

Introduction: The researcher guide the students on how to answer the questions.

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

Step I. Student activity: Briefly differentiate between the skilled and unskilled labour.

……
……
……

Step II. Student activity: State two examples each of a skilled and unskilled labour.

……
……
……
……
……

EVALUATION: The researcher provide answers to the questions above.

CONCLUSION: The researcher asks students to ask questions on the difficult areas.

APPENDIX J

PROBLEM-SOLVING METHOD OF TEACHING COMMERCE LESSON PLAN IV

WEEK 4

Date:-

School: GSS SHIKA

Subject: Commerce

Topic: Factors that determine the level of production

Class: SSI

Time: 11:00 -11:40

Duration: 40 Minutes

General Objective: At the end of the topic, students should be able to states five factors that determine the level of production

Behavioural Objective: At the end of the lesson students should be able to list at least three factors that determine the level of production.

Previous Knowledge: The students have experience on some factors of production.

TEACHING AIDS:

Materials e.g. Chart and Textbook

Introduction: The researcher guide the students on how to answer the questions.

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

Step I. Student activity: State five factors that determine the level of production

……
……
……
……
……

Step II. Student activity: Explain three factors that determine the level of production.

……
……
……
……
……
……
……
……
……
……

EVALUATION: The researcher provide answers to the questions above.

CONCLUSION: The researcher asks students to ask questions on the difficult areas.

APPENDIX K

DEMONSTRATION METHOD OF TEACHING COMMERCE LESSON PLAN I

Week 1

Date:-

School: GSS Kwangila

Subject: Commerce

Topic: Production

Class: SSI

Time: 11:00 -11:40

Duration: 40 Minutes

General Objective: At the end of the topic, students should be able to define production

Behavioural Objective: At the end of the lesson, students should be able to state and comprehend the meaning of production.

Previous Knowledge: The students have known how to source information on their own

TEACHING AIDS:

Materials e.g Chart and Textbook

Introduction: The researcher will explain to the students what is expected from the students

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

Step I. The researcher define production with examples.

Step II. The researcher explain the difference between direct and indirect production.

Step III. The researcher states each three examples of direct and indirect production.

EVALUTION: The researcher explained in brief the different between direct and indirect production.

CONCLUSION: The researcher asks students to ask questions on the difficult areas.

APPENDIX L

DEMONSTRATION METHOD OF TEACHING COMMERCE LESSON PLAN II

Week 2

Date:-

School: GSS Kwangila

Subject: Commerce

Topic: Factors of production and types of production

Class: SSI

Time: 11:00 -11:40

Duration: 40 Minutes

General Objective: At the end of the topic, students should be able name the factors of production and the types of production.

Behavioural Objective: At the end of the lesson, students should be able to differentiate between the factors of production and the types of production.

Previous Knowledge: Students have known the factors of production and the types of production on their own ways.

TEACHING AIDS:

Materials e.g. Chart and Textbook

Introduction: The researcher guide the students on how to answer the questions on their own.

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

Step I The researcher States four factors of production.

Step II The researcher list three types of production.

Step III The researcher differentiate between labour and capital.

Step IV The researcher states the difference between land and entrepreneur.

Step V The researcher Explain two types of production.

EVALUATION: The researcher explain three types of production

CONCLUSION: The researcher asks students to ask questions on the difficult areas.

APPENDIX M

DEMONSTRATION METHOD OF TEACHING COMMERCE LESSON PLAN III

Week 3

Date:-

School: GSS Kwangila

Subject: Commerce

Topic: Skill and unskilled labour

Class: SSI

Time: 11:00 -11:40

Duration: 40 Minutes

General Objective: At the end of the topic, students should be able to differentiate between skill and unskilled labour.

Behavioural Objective: At the end of the lesson, students should be able to: identify the skill labour and unskilled labour.

Previous Knowledge: The students on their own have the experience of skills in their performances

TEACHING AIDS:

Materials e.g. Chart and Textbook

Introduction: The researcher guide the students on how to answer the questions.

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

Step I. The researcher briefly differentiate between the skilled and unskilled labour.

Step II. The researcher state two examples each of a skilled and unskilled labour.

EVALUATION: The researcher explain briefly on the differences between skilled and unskilled labour.

CONCLUSION: The researcher asks students to ask questions on the difficult areas.

APPENDIX N

DEMONSTRATION METHOD OF TEACHING COMMERCE LESSON PLAN IV

WEEK 4

Date:-

School: GSS Kwangila

Subject: Commerce

Topic: Factors that determine the level of production

Class: SSI

Time: 11:00 -11:40

Duration: 40 Minutes

General Objective: At the end of the topic, students should be able to states five factors that determine the level of production

Behavioural Objective: At the end of the lesson students should be able to list at least three factors that determine the level of production.

Previous Knowledge: The students have experience on some factors of production.

TEACHING AIDS:

Materials e.g. Chart and Textbook

Introduction: The researcher guide the students on how to answer the questions.

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

Step I. The researcher state five factors that determine the level of production

Step II The researcher explain three factors that determine the level of production.

EVALUATION: The researcher brief explanation on two factors that determine the level of production.

CONCLUSION: The researcher asks students to ask questions on the difficult areas.

APPENDIX O

POST-TEST QUESTIONS ON THE COOPERATIVE, PROBLEM-SOLVING AND DEMONSTRATION TEACHINGMETHOD OF TEACHING IN THE SENIOR SECONDARY

SCHOOLS COMMERCE PERFORMANCE

1. The art of transforming raw materials is referred to be…….
   a. Services
   b. Production
   c. Division of labour
   d. Trade.
2. Finished goods are …….
   a. Goods that are recycle for use
   b. Goods that transformed the company
   c. Goods available for consumption
   d. Goods that were paid by the purchaser.
3. At the stage when productions is completed it is referred to be that……
   a. Goods are in the process or distribution
   b. Goods are on the stage of packaging
   c. Goods are almost on the finished stage
   d. Goods and services have finally reach the users
4. …… are two types of goods in the production
   a. Consumer goods and skills
   b. Consumer goods and finished goods
   c. Consumer goods and capital goods
   d. Capital goods and money market
5. One of the following is not the stages involved in production
   a. Imports
   b. Primary
   c. Tertiary
   d. Secondary
6. Example of capital goods are……
   a. Milk, bread and machine
   b. Lorries, cars and raw materials
   c. Raw materials, beer and teacher services
   d. Lawyer barber and machines
7. Example of consumer goods are……
   a. Bread, the services of a teacher and milk
   b. Tractors, engines and machines
   c. Ships, lorries and fruits
   d. Raw materials, bread and Malta Guinness
8. Primary production comprised of …… except
   a. Farming

b. Fishing
c. Mining
d. Teaching

9. One of the following referred to be secondary production
   a. Manufacturing
   b. Advertising
   c. Banking
   d. Farming
10. The art of extraction is said to be …….
   a. Tertiary stage of production
   b. Secondary stage of production
   c. Primary stage of production
   d. All of the above
11. The single art of processing and transforming a product is called……..
   a. Secondary production
   b. Tertiary production
   c. Primary production
   d. All of the above
12. A means where goods produce are taken to another place is called……
   a. Banking
   b. Transportation
   c. Tourism
   d. Warehousing
13. Services which involved direct and indirect are classified to be……..
   a. Primary services
   b. Secondary services
   c. Tertiary services
   d. None of the above
14. One of the following is not an example of direct services
   a. Soldier or teacher
   b. Barbing or housemaids
   c. Stewards or cooks
   d. Mail or gardeners
15. Indirect services include the following except……
   a. Government Doctors and Nurses
   b. Police and Soldiers
   c. Civil defences and Customs
   d. Barbing and house maids
16. An activities which engage people in order to earn a living is……..
   a. Occupation
   b. Education
   c. Industry
   d. Skill and training
17. One of the following is not a factor of production
   a. Capital
   b. Labour

c. Land
d. Insurance

18. One of the factor of production is characterised as a free gift of nature and is fixed
    a. Labour
    b. Insurance
    c. Land
    d. Capital
19. The production factor that is characterised as coordinator of others factors is called……..
    a. Land
    b. Entrepreneur
    c. Labour
    d. Money

20. The capital that changes its form in the process of production is called
    a. Circulating capital
    b. Current capital
    c. Social capital
    d. Fixed capital

COMMERCESS I ESSAY QUESTIONS ON THE POST TEST STUDENTS

PERFORMANCE

INSTRUCTIONS: Answer two questions only.

1. Briefly differentiate between direct and indirect production
2. List and explain two factors of production
3. Briefly explain the following
    i. Primary production
    ii. Secondary production
    iii. Tertiary production

MARKING SCHEME FOR THE POST-TEST (3marks each total 6omarks)

1.b	2.c	3.d	4.c	5.a	6.b	7.a	8.d	9.a	10.c
11.a	12.b	13.c	14.a	15.d	16.a	17.d	18.c	19.b	20.b

ESSAY MARKING SCHEME FOR THE POST-TEST (20marks each for answering two Questions total 40 marks)

1. The direct production is the production which individual produces goods and services only for family use or consumption while indirect productions is the production of goods and services produced in large scale or quantity for sales or exchange for other needs.
2. Land, labour, capital and entrepreneur.

i. Land: It is immobile, that means that it cannot be moved from one geographical location to another. The supply of land is fixed and the reward is rent.
ii. Labour: is a form of human effort put into production. The reward is wages and salaries. Labour is classified into two ie unskilled and skill .The unskilled labour requires little or no formal education, while skilled labour undergone special training in their institutions of learning e.g. Accountants, lawyers Engineers, Medical Doctors Teachers etc.
iii. Capital: is referred to wealth use in raising wealth in the business. It could be in form of money, properties or services. The reward for capital is profit.
iv. Entrepreneur: is the coordinator of other factors of production. He take cares of the planning, supervisions, analysing, evaluating and taking decision toward implementation of set goals.

APPENDIX P

Pre-Test Questions on SSI Commerce Performance

Instructions: Answer all questions in this test.

Time: 60 Minutes Tick Male ( ) Female ( )

Pre-Test questions

1. Which of the following is not true of commerce?
    a. It is part of production.
    b. It creates time and place utility.
    c. Commercial activities begin after the goods are produced.
    d. It the life blood of a nation's economic activities.
2. Capital owned is the same as ……
    a. Authorised capital.
    b. Issued capital
    c. Net work of a business.
    d. Fixed assets of a business.
3. The practice of selling goods in foreign markets at less than the cost price is known as ….
    a. A fair trading
    b. Over invoicing
    c. Smuggling.
    d. Dumping.
4. A group of firms that produce similar goods or services is called.

a. An industry.
b. A trade association.
c. A cartel.
d. A holding company.

5. The rate at which one country's products are exchanged for the product of another is ….
   a. Balance of trade.
   b. Balance on current account.
   c. Terms of trade.
   d. Foreign exchange.
6. Which of the following is not an aim of advertising?

   a. Make one's product known.
   b. Satisfy consumers
   c. C. helps firms compete with others.
   d. A drive away smaller firms.
7. Which of the following is an example of extractive industry?

   a. Sewing dresses
   b. Baking bread.
   c. Assembling of iron rods.
   d. Digging for precious stones.
8. Which of the following carriers the bulk of goods involved in foreign trade?

   a. Cargo liners.
   b. Tramp vessels.
   c. Tankers.
   d. Steam ship.
9. Commerce is not concerned with ……..

   a. Changing the place of a product.
   b. Changing the form of a product.
   c. Changing the ownership of a product.
   d . Distribution of a product.

10. Which of the following categories of workers does not provide direct service?

    a. Teachers
    b. Doctors.
    c. Wholesaler.
    d. Musicians.
11. The amount of capital supplied by the owners of a company is known as ……

    a. Loan Capital.
    b. Working capital.
    c. Share capital.
    d. Capital employed.
12. Which of the following is not a tool for sales promotion.

a. Advertising.
b. Free samples.
c. Personal selling
d. Exhibition.

13. Rate of turnover is the ……..

a. A number of times opening stock is sold during a period.
b. Rate paid by retailers for their stocks.
c. Rate paid to agents for turning over their stock at a given period.
d. Number of times the stock is turned.

14. Which of the following is not a function of a warehousing?

a. Creating scarcity of goods.
b. Stabilisation of price.
c. Production ahead of demand.
d. Storage of goods.

15. A term which describes the value of business connections made by a company over the years is known as……

a. Patent.

b. Copyright.

c. Goodwill.

d. Trademark.

16. The last link in the production process is the …….

a. Transporter.

b. Wholesaler.

c. Consumer.

d. Retailer.

17. Advertising efforts geared towards a particular audience is known as ……

a. Mass advertising.

b. Direct advertising.

c. Persuasive advertising.

d. Indirect advertising.

18. A country is said to achieve a trade surplus when total……..

a. Visible exports exceeds total visible imports.
b. Invisible Imports exceeds total visible exports.
c. Visible exports exceeds total invisible imports.
d. Visible imports exceeds total visible exports.

19. Which of the following widens the market for goods?

a. Warehousing.
b. Transport.
c. Insurance.
d. Banking.

20. Which of the following belong to the capital market?

a. Commercial Bank.
b. Stock Market.
c. Ministry of Finance.
d. Chamber of Commerce.

Commerce SS I Pre -Test Essay Questions on Students Performance

Instructions: Answer any two questions only.

1. What is Commerce?
2. Differentiate between home and foreign trade.
3. List five functions of commerce

Pre-test Objective Marking Scheme 3 marks each total (60 marks)

1 c	2 c	3 d	4 a	5 c	6 d
7 d	8.a	9 b	10 c	11 c	12 d
13 d	14 c	15 c	16 c	17 b	18 a
19 b	20 b				

PRE-TEST ESSAY MARKINT SCHEME 20 MARKS EACH TOTAL (40 MARKS)

1. Commerce is the activities that involved in the distribution and exchange of goods and services or is a branch of production which is concerned with the distribution, exchange of goods and services and all activities which help in facilitating trade eg. Banking, insurance, transportation, communication, tourism etc.
2. Home trade is a trade that involving buying and selling of goods and services within a geographical area of a Nation e.g Lagos and Kano. While foreign trade is a trade that involved buying and selling of goods and services beyond the geographical boundaries of a country or between one country and another.e.g Nigeria and Ghana.
3. The five functions of commerce include the following.
    1. Mass production of goods and services.
    2. Raising of capital.
    3. Employment opportunities.
    4. Transportation.

5. Warehousing.
6. Create unity among Nations.
7. Improvement in the standard of living.
8. Risk bearing.
9. Exchange of goods and services.
10. Creation of public awareness.
11. Creation of wealth for the Nations.

Appendix Q
Pretest and post test scores of students

Pre test		pre test		pretest	
Cooperative		**Demonstration**		**Problem-solving**	
Male	**female**	**male**	**female**	**male**	**female**
29	44	36	25	35	37
48	20	40	51	29	25
30	41	41	41	39	31
41	36	28	32	36	41
26	52	27	42	42	39
49	32	36	39	41	48
37	42	30	38	37	29
38	28	25	24	39	32
52	31	27	42	35	41
48	35	48	35	29	47

Pre test	pre test	pretest
Cooperative	**Demonstration**	**Problem-solving**
Male and female	**Male and female**	**Male and female**
29	36	35
48	40	29
30	41	39
41	28	36
26	27	42

49	36	41
37	30	37
38	25	39
52	27	35
48	48	29
44	25	37
20	51	25
41	41	31
36	32	41
52	42	39
32	39	48
42	38	29
28	24	32
31	42	41
35	35	47

Post test Cooperative		Post test Demonstration		Post test Problem-solving	
Male	**Female**	**Male**	**Female**	**Male**	**Female**
43	52	46	48	65	56
47	61	52	45	54	47
53	34	49	42	52	43
61	52	53	43	46	53
45	48	46	62	68	37
53	43	68	54	58	42
59	41	56	54	52	48
48	50	46	35	56	64
49	37	63	67	48	35
62	39	46	58	51	49

Post test Cooperative	Post test Demonstration	Post test Problem-solving
43	46	65
47	52	54
53	49	52
61	53	46
45	46	68
53	68	58
59	56	52
48	46	56

49	63	48
62	46	51
52	48	56
61	45	47
34	42	43
52	43	53
48	62	37
43	54	42
41	54	48
50	35	64
37	67	35
39	58	49