# EFFECT OF PROBLEM-SOLVING AND GUIDED-DISCOVERY TEACHING METHODS ON STUDENTS’ ACADEMIC PERFORMANCE IN FINANCIAL ACCOUNTING IN SECONDARY SCHOOLS IN KWARA STATE, NIGERIA

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**NOVEMBER, 2017**

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**A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA, NIGERIA, IN PATIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF BUSINESS EDUCATION DEGREE**

**DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION, AHMADU BELLO UNIVERSITY,**

**ZARIA, NIGERIA**

**NOVEMBER, 2017**

**DECLARATION**

I declare that this dissertation titled effect of problem-solving and guided-discovery teaching methods on students‟ academic performance in financial accounting in secondary schools in Kwara 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 dissertation was previously presented for another degree or diploma in this or any other Institution.

**Rafiu Olawale YUSUF Date**

# CERTIFICATION

This Dissertation titled EFFECT OF PROBLEM-SOLVING AND GUIDED- DISCOVERY TEACHING METHODS ON STUDENTS‟ ACADEMIC PERFORMANCE IN FINANCIAL ACCOUNTING IN SECONDARY SCHOOLS IN

KWARA STATE, NIGERIA by Rafiu Olawale YUSUF meets the regulations governing the award of master of business education degree of the Ahmadu Bello University, Zaria, and is approved for its contribution to knowledge and literary presentation.

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# DEDICATION

This work is affectionately dedicated to my late parents and late brother.

# ACKNOWLEDGEMENT

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# LIST OF ABBREVIATIONS

|  |  |
| --- | --- |
| **Abbreviations** | **Full Meaning** |
| DTM | Direct Teaching Method |
| ESSS | Ero-Omo Senior Secondary School |
| GDTM | Guided-Discovery Teaching Method |
| ILSSS | Ilorin-South Senior Secondary School |
| NECO | National Examination Council |
| OSSS | Okelele Senior Secondary School |
| PSTM | Problem-Solving Teaching Method |
| SSS | Senior Secondary School |
| WAEC | West African Examination Council |

# OPERATIONAL DEFINITION OF TERMS

**Academic performance:** Academic performance is the outcome of

education, the extent to which a student

And institution has achieved their educational goals.

**Direct Teaching Method:** Is a process whereby teachers give whole talk

on a subject matter to students, while the students listen and think about the lesson taught.

**Guided-Discovery Teaching Method:** Method of instruction which involves helping

learners to discover certain facts or answers to problems.

**Problem-Solving Teaching Method:** Method of teaching which involves

presentation of a problem to the whole class and the entire students are requested to find solution to it.

# ABSTRACT

The study was carried out to assess the effect of problem-solving and guided-discovery teaching methods on students‟ academic performance in financial accounting in secondary schools in Kwara State, Nigeria. Five objectives, five research questions were raised to guide the study; while five null hypotheses were raised and tested at 0.05 level of significance. The research design used was quasi-experimental. The population was nineteen thousand two hundred and thirty eight (19,238) SS II Financial accounting students. Purposive sampling procedure was used for the study and one hundred and twenty (120) students were used as sample size for the study. The instrument used for data collection was a self- developed financial accounting achievement test (FAAT). Mean and Standard Deviation were used to answer the stated research questions. Pearson Product Moment Correlation (PPMC) was used to test null hypotheses one and two, while t-test statistics was used to test null hypotheses three, four and five. From the results of the study, hypotheses one to three were rejected while hypothesis four and five were retained. The summary of the study showed that students in problem-solving and guided-discovery teaching methods performed better than those in the conventional (direct teaching method), and male and female students performed relatively better with the use of guided discovery teaching method. It is concluded therefore that, problem- solving and guided-discovery teaching methods has a positive effect on students‟ academic performance in financial accounting in secondary schools. Based on the findings, five recommendations are postulated, among others that the use of Guided- discovery teaching method should be instituted in the teaching and learning of financial accounting in secondary schools in Kwara state, Nigeria.

# CHAPTER ONE INTRODUCTION

## Background to the Study

Financial accounting is one of the business education subjects offered at both secondary and tertiary levels in the nation‟s private and public institutions for job skills, employment and self-reliance. Elements of financial accounting are taught at the junior secondary school level as an aspect of business studies. At the senior secondary school level, financial accounting is offered as a full-fledge subject. Financial accounting graduates play a vital role in an economy, hence the need for accounting‟s graduate to be properly trained to discharge their duties effectively and to face emerging challenges in the profession. Financial accounting is the process of identifying, measuring and communicating economic information about an organization for the purpose of making decisions and informed judgment.

National Examination Council (NECO, 2012) has states that the general objective of studying financial accounting at the senior secondary school level is to enable students appreciate the basic rules, functions and principles of accounting, to lay proper foundation for further study of accountancy and allied courses at the higher level and to enable students understand basic accounting principles, practices and their application to modern business activities. Also, Nigerian Educational Research Development Council (NERDC, 2007) expressed the specific objectives of teaching financial accounting in secondary schools to include preparing students for employment, or for further studies. These objectives can only be realized if academic performance of secondary school students in financial accounting is encouraged through efficient teaching occasioned by accommodating learning environment.

Academic performance is the outcome of education, the extent to which a student, teacher or institution has achieved their educational goals. Academic performance is commonly measured by examination, continuous assessment or Cumulative Grade Point Average (CGPA) of students. Academic performance also refers to what students achieve in their studies and how they cope with or accomplish different learning experiences given to them by their teachers. Ibrahim (2011) reported that in educational institutions, success is measured by academic performance, or how well a student meets the standards set out by the institution.

To achieve the objectives of teaching financial accounting at the secondary school level, financial accounting teachers should employed various instructional methods in the cause of teaching. Teaching can be said to be the science and art of assisting a person to learn in cause of teaching and learning processes. The science of teaching entails the use of acquired knowledge from natural and behavioural science in order to help appreciate the circumstance and personality of the learner, while the art aspect of teaching involves the use of creative and demonstrative skills in aiding the delivery of instruction. In order to achieve positive and desirable learning outcome in course of teaching and learning processes, relevant teaching method(s) must be adopted by the teacher, who is the person knowledgeable about the subject or topic(s) to be taught.

Teaching methods refer to the combination of techniques adopted by the teacher in order to impact the learners with the necessary skills and knowledge required to achieve the goal of the lesson. It is also a medium through which a teacher passes knowledge**,** instruction, or training to his students. A method of instruction is not effective if at the end of the instruction or training students have not learned. Therefore, if learners must imbibe the right skills and attitudes, teaching must be effective. Effective

teaching, according to Mkpa (2009), consists of four elements i.e purposeful and planned teaching, mastery of subject matter, display of conceptual-skills, and instructional methods.

Like any other teaching methods, guided-discovery and problem-solving are adopted by teachers to encourage efficient instructions of practical oriented subjects including Financial Accounting at any level of school system of which senior secondary school is no exemption. Guided Discovery is a teaching method that encourages students to take an active role in the learning process by answering series of questions or solving problems designed to introduce a general concept. With Guided-discovery method of teaching, students solve problems but the teacher provides directions on how to solve the problems and also to keep the students on track. Guided-discovery involves helping learners to discover certain facts or answers to a given problem. Guided-discovery also involves inquiry method that stimulates a learner‟s interest in seeking information about ideas and concepts by asking questions. Guided discovery drills learners and enables them search for knowledge in a systematic and logical way.

Problem solving method of teaching involves the presentation of a problem to the whole class and the entire students are requested to find solution to it. Problem- solving method involves identifying the problem, planning alternative behavior that may resolve the problem, activating the most promising of this behavior, evaluating the consequences**,** and applying the process to new problems as they arise (Awoniyi, 2007).

Ajoma (2009) describes direct teaching method (conventional method) as a process whereby a teacher gives a talk on a subject to the students, while the students listen and think about the lesson taught. To Ajoma (2009), though direct teaching method has the advantage of being useful in a large class and in advanced level of learning, it should not be encouraged in the secondary schools. Siagh and Rana (2004), see the direct

teaching method has received more criticism than any teaching strategy, yet it continues to be used extensively. Teachers believe that direct teaching method is undoubtedly as one of the more efficient means of conveying large quantities of information in short period of time. The method is characterized with listening on the part of the students and that is not too ideal to teach students. It‟s chief disadvantage is that it does not encourage students' participation in the lesson and is often referred to as teacher-centered method.

From the foregoing, it could be inferred that methods of teaching financial accounting largely determine whether students would learn or not. It means that if the appropriate teaching methods are not used effectively, learning would not take place and students‟ academic performance would be poor. This might, no doubt, account for student‟s of Kwara State a low performance in financial accounting in the senior secondary schools certificate examinations conducted by NECO between 2010 and 2014

- 2010 (44.9%), 2011 (47.8%), 2012 (39.8%), 2013 (35.4%) and 2014 (32.6%). The

same observation was made Onaolapo (2015) who states that ineffective teaching methods used by financial accounting teachers in secondary schools have failed to produce students with needed skills for employment and admission into tertiary institutions.

Kwara State was created on 27th May, 1967 and it is one of the six states in North-Central Geo-Political Zone of Nigeria. At its creation in 1967, Kwara State has a land area of about 32,500 square kilometers with a population of over 1.5 million made up of four main ethnic groups. The State shares boundaries with Ekiti, Oyo, Osun, Kogi and Niger State. The state is made up of sixteen local governments areas as Asa, Baruten, Edu, Ekiti, Ifelodun, Ilorin East, Ilorin South, Ilorin West, Irepodun, Isin, Kaiama, Moro, Offa, Oke Ero, Oyun and Patigi with three hundred and fourty-seven

(347) public senior secondary schools. It is, therefore, against this background that the

researcher investigated the effect of problem-solving and guided-discovery teaching methods on the students‟ academic performance in financial accounting in the senior secondary schools in Kwara State, Nigeria.

## Statement of the Problem

The rate at which students failed in external examinations in financial accounting in Kwara state from 2010 to 2014 is of great concern to the state government, teachers, parents, guardians and well meaning citizens. It has been observed that the government huge investment on education is not yielding the desired dividend, financial accounting teachers also complained of students‟ low academic performance in both internal and external examinations. This is evident from the data collected by the researcher from Kwara State Teaching Service Commission (KSTSC), Ilorin in 2015. The results revealed percentage failure rate by students in financial accounting in NECO from 2010 to 2014 to be 55.1%, 52.2%, 60.2%, 64.6% and 67.4% respectively. In spite of the various instructions methods available to the accounting teachers, the performances of students in financial accounting in public secondary schools in kwara state over the years have not been encouraging.

As indicated in the background of the study, there are a number of methods of teaching financial accounting in the secondary schools. Indication are that problem- solving and guided- discovery instruction methods are considered to be among the best and effective methods of teaching financial accounting at the secondary schools level. However, indications from research findings in the area are that there is no clear finding as to whether which of the two teaching methods is more effective for teaching financial accounting. This research is therefore, undertaken to establish which of the two instructional methods is more effective for teaching financial accounting. In other words, the study is to establish which of the two teaching methods could be more effective for

establishing the level of student‟s academic performance in senior secondary school financial accounting.

## Objectives of the Study

The major objective of the study is to establish the effect of problem-solving and guided-discovery methods on the students‟ academic performance in financial accounting in senior secondary schools in Kwara state, Nigeria. The specific objectives are to:

* + 1. determine the effect of problem-solving teaching method on performance of senior secondary school students in financial accounting in Kwara state, Nigeria.
    2. determine the effect of guided-discovery teaching method on performance of senior secondary school students in financial accounting in Kwara state, Nigeria.
    3. determine the difference in the effect of problem-solving teaching method and guided-discovery teaching method on performance of senior secondary school students in financial accounting in Kwara state, Nigeria.
    4. determine the difference in the effect of problem-solving teaching method and guided-discovery teaching method on performance of senior secondary school male students in financial accounting in Kwara state, Nigeria.
    5. determine the difference in the effect of problem-solving teaching method and guided-discovery teaching method on performance of senior secondary school female students in financial accounting in Kwara state, Nigeria.

## Research Questions

The following five research questions were raised to guide the study:

* + 1. What is the effect of problem-solving teaching method on performance of senior secondary school students in financial accounting in Kwara state, Nigeria?
    2. What is the effect of guided-discovery teaching method on performance of senior secondary school students in financial accounting in Kwara state, Nigeria?
    3. What is the comparative effect of problem-solving teaching method and guided- discovery teaching method on performance of senior secondary school students in financial accounting in Kwara state, Nigeria?
    4. What is the difference in the effect of problem-solving teaching method and guided-discovery teaching method on performance of senior secondary school male students in financial accounting in Kwara state, Nigeria?
    5. What is the difference in the effect of problem-solving teaching method and guided-discovery teaching method on performance of senior secondary school female students in financial accounting in Kwara state, Nigeria?

## Research Hypotheses

The following null hypotheses were propounded and tested at 0.05 level of significance.

* + 1. Problem-solving teaching method has no significant effect on the performance of senior secondary school students in financial accounting in Kwara state, Nigeria.
    2. Guided-discovery teaching method has no significant effect on the performance of senior secondary school students in financial accounting in Kwara state, Nigeria.
    3. There is no significant difference in the effect of problem-solving teaching method and that of guided-discovery teaching method on the performance of senior secondary school students in financial accounting in Kwara state, Nigeria.
    4. There is no significant difference in the effect of problem-solving teaching method and guided-discovery teaching method on performance of senior secondary school male students in financial accounting in Kwara state, Nigeria.
    5. There is no significant difference in the effect of problem-solving teaching method and guided-discovery teaching method on performance of senior secondary school female students in financial accounting in Kwara state, Nigeria.

## Significance of the Study

The findings of this study is expected to be relevant to the following groups of stake holders: government, school administrators, financial accounting teachers, students, parents, educational bodies, curriculum planners, textbook publishers and the larger society.

Government always invests heavily in education. Where academic performance of students is enhanced and encouraged through appropriate and effective methods of instruction or teaching methods, it means government‟s heavy investment is justified.

School administrators are also interested in fostering excellent academic achievements and are also often concerned about their reputations and the possibility of financial supports from government institutions, stake-holders and other Non- Governmental Organization (NGOs), which, in most cases, is dependent on students‟ performance.

The outcome of this study will also be of great importance to the financial accounting teachers as it will help them in the selection and the use of appropriate teaching methods that will enhance students‟ academic performance. With the use of appropriate and relevant teaching methods, financial accounting students will also benefit by motivating students‟ interest and their parents toward the financial accounting.

Also, it is hoped that other researchers will benefit from the research findings as it can serve as reference materials and empirical evidence for them. Curriculum developers who decide on syllabi and recommend effective, suitable and appropriate methods of instruction would consider the result of this study with a view of recommending it as a teaching strategy in schools where appropriate.

Textbook publishers would include in their publications the findings of this study for teaching financial accounting at secondary education level. Finally, the result the findings of this study will benefit society at large, as the students are part of the society. Therefore, anything that thus affects the students is of interest of the society.

## Basic Assumptions of the Study

The basic assumptions for this study were:

* + 1. Students‟ low performance in financial accounting is caused by ineffective instructional methods adopted by teachers during teaching and learning process.
    2. Students‟ performance in financial accounting will be enhanced by the use of problem-solving and guided-discovery teaching methods in senior secondary schools in Kwara state.
    3. Factors other than teaching methods have the same effect on student‟s performance in financial accounting (such as peer influence, learning materials, teacher qualification, infrastructural facilities, and parental influence).

## Delimitation of the Study

The study was delimited to public senior secondary schools in Kwara State, Nigeria. This was because, the rate of poor academic performance in financial accounting was more pronounced in the public senior secondary schools compared to private secondary schools in the state. The study was also delimited to problem-solving and guided-discovery teaching methods as against the use of traditional direct teaching methods in the teaching financial accounting in senior secondary schools. Problem- solving and Guided-discovery teaching methods were purposely chosen because they were among modern-day teaching methods not commonly used by teachers in teaching financial accounting in senior secondary schools. The study was further delimited to Okelele Senior Secondary School, Ilorin, Ilorin-South Senior Secondary School and Ero- Omo Senior Secondary School Ilorin. The schools were purposely chosen because they are one of the oldest and the most populous secondary school in Kwara State with the highest number of commercial students offering financial accounting subject as at 2015/2016 academic session.

The research work was delimited to the topic partnership account up to partners current accounts because it constitute one of the common area in West African Senior School Certificate Examination (WASSCE) objectives and theory questions focus almost every year. Only SS II commercial students both male and female taking financial accounting in the 2015/2016 academic session were covered under the study because the

research delimited topic (Partnership Account) is in the year II secondary schools‟ curriculum course contents of financial accounting.

# CHAPTER TWO

**REVIEW OF RELATED LITERATURE**

The chapter reviewed literature related to the study under the following sub- headings:

* 1. Theoretical Framework
     1. Concept of Financial Accounting
     2. Concept of Academic Performance
     3. Concept of Problem-Solving Method
     4. Concept of Guided-Discovery Method
  2. General Teaching Methods and Teaching Techniques
  3. Teaching Methods in Financial Accounting
  4. Ancillaries to Teaching Methods
  5. Problem-Solving Teaching Method in Financial Accounting
  6. Guided-Discovery Teaching Method in Financial Accounting
  7. Review of Related Empirical Studies
  8. Summary of Related Reviewed Literature

## Theoretical Framework

The theoretical framework for this study was based on Jean Piaget constructivism learning theory of 1969. The theory stated that humans generate knowledge and meaning from an interaction between their experiences and ideas. It is an interaction between their experiences and ideas which reflexes a behaviour patterns. This theoretical framework holds that learning always builds upon knowledge that a student already knows. Jean Piaget called these systems of knowledge schemata and described

constructivist classroom as; the learners are actively involved in teaching and learning processes, the learning environment is democratic, the activities are interactive and student-centered and teachers facilitate a process of learning in which students are encouraged to be responsible and autonomous. Among other notable authors that support constructivism learning theory include; John Dewey, Maria Montessori, Jerome Bruner, Lev Vygotsky, Herber Simon and Paul Watzlawick.

The arguments on this theory state that, effective learning can only take place, if a learner is active participant not perceive listener in the course of teaching and learning process and these call for use of appropriate teaching methods like guided-discovery and problem-solving teaching methods which are basically student‟s centered activity oriented teaching strategy. Active involvement of students is emphasized in constructivism learning theory, hence knowledge gained last long in students memory. Memorized facts or information that has not been connected with the learner‟s prior experiences may be quickly forgotten. In short, the teacher must employ students centered activity oriented teaching strategy in order to enable the learner to actively construct new information onto his/her existing mental framework for meaningful learning to take place.

This Theory was used because it explained the ways and manners in which learners actively take knowledge, connect it to previously assimilated knowledge and make it theirs by constructing their own interpretation with the influence of environment under the teachers‟ guide, using appropriate methods of instruction to solve problem in the world around them. It is the theory of learning that describes the central role that learner‟s ever-transforming mental schemes play in their cognitive growth. Constructivism is therefore a learning theory which engages learners in active process of instruction by processing knowledge based on perceived notions and existing personal

knowledge just as problem-solving and guided-discovery teaching methods. Thus, learning is a process whereby students themselves are the primary actors and actively interpret and impose meaning through the lenses of their existing knowledge structure. The two independent variable in this research work problem-solving and guided- discovery teaching methods are related to constructivism learning theory because the theory emphasized active participation of the learner in the course of teaching and learning process. Also, this thought of learning is found in Dewey‟s thought, that learning by experimentation or doing is more lasting. Hence, it is a process by which students experience the power and usefulness of acquired knowledge to solve task in the world around them through problem-solving and guided-discovery methods through inquiry and application to provide a consistent context for learning and applying it to solve problem in their immediate environment through the guides of their teachers.

## Concept of Financial Accounting

Accounting is a concept that affects everybody in his or her personal live just as much as it affects every business unit. We all employ accounting ideas when we plan what we are going to do with our money. Accounting has come to be known as the language and eyes of business because owners, investors, employees, creditors, and others use the results of the accounting process in their planning, control, and decision making activities related to the achievement of an organization‟s objective. It is used in the business world to describe the transaction entered into by all kinds of organization and people associated with business such as managers, owner of investment, investors, bankers, lawyers, marketers, estate agents, stock brokers and accountant.

Financial accounting is one of the key business subjects in new senior secondary education curriculum structure of business studies. Udoh (2003) sees financial accounting as a specialized area of instruction that deals directly with business skills and

techniques, business knowledge and facts, business understanding, economic understanding business attitudes and appreciations necessary to understand and adjust to the economic and social institution called “business”. Financial accounting is a process of identifying, measuring and communicating economic information about an organization for the purpose of making decisions and informed judgments. Accounting is not counting but it is science which is helpful for hunting for the results of business. Accounting is recording, analysis and finalization of large scale business transactions. Accounting introduces all tools and techniques to solve many or almost every problem of businessmen, factories, corporations and firms relating to maintaining accounts and different financial reports (Daniel, David & Wayne, 2006).

According to Longe and Kazeem (2006), accounting is an important element of this evolving market and can support or undermine the efficiency of a market. The lack of common accounting requirements around the world serves as a significant impediment to economic globalization by restricting an investor‟s ability to make informed decision about investment alternatives. Financial accounting is a discipline concerned with the recording, analyzing and forecasting of incomes and wealth of business and other entities. Generally, it records in money terms the flow of economic values between or within economic entities (Udoh, 2004). Wild (2006) described Financial accounting as an information and measurement system that identifies, records and communicates relevant, reliable and comparable information about an organizations business activities.

Elumilade (2006) referred financial accounting as the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of a financial character and interpreting the result thereof. Barbara and Robert (2007) described financial accounting as systematic and comprehensive recording of financial transactions pertaining to a business. Accounting

also refers to the process of summarizing, analyzing and reporting these transactions. The financial statements that summarize a large company's operations, financial position and cash flows over a particular period are a concise summary of hundreds of thousands of financial transactions it may have entered into over this period. Accounting is one of the key functions for almost any business; it may be handled by a bookkeeper and accountant at small firms or by sizable finance departments with dozens of employees at larger companies. Accounting is a discipline that involves the process of measuring, interpreting, and communicating financial information decisions (Ezeani, 2008). According to the free dictionary Wikipedia (2010), financial accounting is the branch of accounting involving preparation and publication of financial statements, earnings, reports and other forms for disclosure to shareholders, regulators or any other stakeholder. A basic knowledge of Financial Accounting equips students with the knowledge of keeping adequate records of financial transaction and a good analysis of business liquidity and profitability (Azih, 2010). Nonye and Nwosu (2011) asserted that financial accounting involves the collection, recording, summarizing, analyzing and reporting in monetary terms, information about a business organization to the users of such information.

To Shitu and Unogu (2012), financial accounting is the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are in part at least of financial character and interpreting the result. From the aforementioned definitions of financial accounting by several authors, it is concluded that financial accounting implies a process of gathering, sorting, recording, classifying, verifying, measuring and summarizing financial transactions and subsequently interpreting and communicating such information to the users for decision making and objectives assessments. Asaolu quoted in Enwere and Enwere (2014)

describes financial accounting as the process of recording, classifying, selecting, measuring, interpreting, summarizing and reporting financial data of an organization to the users for objectives assessment and decision making.

## Concept of Academic Performance

Academic performance refers to as what learners achieve in their studies and how cope with or accomplish different learning experience given to them by their teachers. Rothstein (2000) described academic performance as to successful accomplishment or performance in particular subject area. It is indicated by grades, marks, and scores of descriptive commentaries. Kobaland and Musek (2001) defined performance on task with measures including comprehension, quality and accuracy of answers of tests, quality and accuracy of problem solving, frequency and quantity of desired outcome, time or rate to solution, time on task level reasoning and critical thinking, creativity, recall and retention and transfer of tasks. Aka (2005), defined academic performance as the index of general mental abilities which are responses to test of different kinds. In societies like Nigeria where standardized test of different kinds exist, the academic performance of the students is represented by the individual‟s response to standardized scholastic aptitude tests; and the level of response given to such scholastic aptitude tests can help in determining success.

Academic performance according to Abdulsalam (2006) is the outcome of education, the extent to which a student, teacher or institution has achieved their educational goals. Academic performance is commonly measured by examination or continuous assessment or Cumulative Grade Point Average (CGPA) of students. Gouch (2009) opined that academic performance refers to as the way and manner students‟ deals with their studies and how they cope with or accomplish different tasks given to them by their teachers. Ibrahim (2011) also sees academic performance as what students

achieve in their studies and how they cope with or accomplish different learning tasks given to them by their teachers. He reported that success is measured by academic performance in educational institutions or how well a student meets the standards set out by the institution. How students process information and approach a learning task will eventually influence the quality of the outcome.

## Concept of Problem-solving Teaching Method

The use of problem solving as a strategy for active engagement and practice has been a traditional part of courses in such fields as mathematics, physics and accounting and has now extended to other fields as well. Mishra (2007) reported that problem- solving method involves structuring learning around some central questions or typical practical cases in the discipline. However, the instructor‟s task is more elaborate than simply devising good problems. An essential part of helping students solve problems is the creation of an affective climate that is conducive to risk-taking and the free exchange of ideas.

Direct instruction in the techniques of problem solving is also often required for students who have not had much problem-solving experience. The instructor will need to model how professionals in the field go about defining problems, gathering data, generating hypotheses, and supporting conclusions or solutions. In addition, researchers in teaching problem solving have found that helping students be aware of their problem- solving strategies is a characteristic of effective teachers. Often, having students “talk through” a problem out loud or work in pairs or groups increases their problem –solving skills. (Mishra, 2007).

According to Awoniyi (2007) Problem solving method of teaching involves the presentation of a problem to the whole class and the entire students are requested to find solution to it. The problem solving is a method of correlating sense, experience and

already accepted or established though. It involves identifying the problem, planning alternative behavior that may resolve the problem, activating the most promising of this behavior, evaluating the consequences**,** and applying the process to new problems as they arise.

## Concept of Guided-discovery Teaching Method

The concept of guided-discovery learning has been appeared numerous times throughout history among educational philosophers such as Rousseau, Pestalozzi and Dewey. There is an intimate relation between the processes of actual experience and educational outcome. Discovery learning also enjoyed a few positive swings of the educational trend pendulum in American education, but it has never received overwhelming acceptance. Discovery learning takes place most notably problem solving situations where the learner draws on his own experience and prior knowledge to discover the truths that are to be learned. It is a personal, internal constructivist learning environment. Bruner wrote “Emphasis on discovery in learning has precisely the effect on the learner of leading him to be a constructivist, to organize what he is encountering in a manner not only designed to discover regularity and relatedness, but also avoid the kind of information drift that fails to keep account of the uses of which information might have to be put” (Mayer quoted in Ezeaghasi, 2013).

Ezeaghasi (2013), posited that guided discovery is a student‟s centered activity oriented teaching strategy in which teacher guides the students through problem solving approach to discover answer to instructional topics at hand. Guided discovery involves helping learners to discover certain facts or answer to a given problem. Learners most often depend on their teachers to provide all answers they need. Guided discovery also involves inquiry method that stimulates learner interest in seeking information about ideas and concepts by asking questions. Guided discovery drills learners and enable

learners search for knowledge in a systematic and logic way. This is a method of teaching where the classroom teacher provides the students necessary opportunities to discover new facts, new rules, new methods or techniques for solving problems as well as new values for themselves. The discovery method is also called the “Heuristic method”. The method uses the fact that students discover things for themselves. The method uses the fact that students own experience is the basis of real learning. It is an activity method where people are mentally active all the time. One of the merits of this method is that, it encourages analytical thought but places a considerable amount of burden on the students since it is student centered (Yusuf, 2012).

## General Teaching Methods and Teaching Techniques

Methodology is made up of those activities through which teaching becomes effective. "Method is therefore one of the most fundamental aspects of education", and the central problem of teaching (Aliyu, 2013). Every successful teacher requires the use of sound methods. Teacher methods are actually ways a teacher passes knowledge, instruction or training to his students. A method of instruction is not affective, if at the end of the instruction, or training there is no appreciable thing to show that the students have learned. It must be emphasized that different teaching-methods exist, and therefore, methods that are appropriate and desirable for one subject/course may not apply to another subject; method to be adopted must be student centered. Learning will be most effective if the methodology used places it is greatly emphasis upon the activities and actions of the students rather than those of the teacher (Awoniyi, 2007). Aliyu,(2013), described teaching methods as the procedures by which the teacher makes the learner at his level, starting with his interest and his problem and they establishes condition that enable him to proceed to reach set goals in as effective a manner as possible

Aliyu, (2013) opined that there are many ways in which teachers, through the use of one or combinations of any of the methods perform his tasks. Any of the following (a combination of) teaching methods could be adopted by the teacher.

Inductive Method:

This is a method whereby students are given a number of good examples from which a general rule is drawn. Teachers should always guide the students to discover the rule. The advantage of this method is that learning is always thorough and students may not easily forget the rule. The disadvantage of this method is that it consumes time and little amount of learning may take place.

Deductive Method:

This is a method whereby students are taught the rules first and good examples are given that are drawn from the rule. This is the method that many teachers are using because it is always farther and much of the teaching time is put into discovering new outlines (shorthand) in accordance with the rule given. The advantage of this method lies in its fastness and the active practice by the students. The disadvantage is that students hardly remember the rule and always learn by rote or through guess work.

Demonstration Method:

Demonstration method refers to a situation whereby the teacher will have to practice what he expects the students to do before he asks them to do themselves individually. In shorthand or typewriting for example, the teacher writes the online on the chalkboard or types a particular letter layout on the typewriter while the students watch him do this. Effective demonstration must have a clear view of what is being demonstrated. For meaningful demonstration method, the teacher must be certain that the equipment involved is functional and that:

* + 1. The skill or ability to be demonstrated gives the student the same mental directions
    2. Demonstration should be visible to all as it is intended to benefit all
    3. Demonstration should be used in conjunction with other methods such as discussion method

Individualized Teaching:

Individualized teaching involves a face to face interaction between a teacher and a student at every given time. This method encourages teacher/student rapport when individual student problem is treated at his level. This opportunity allows the student to ask the teacher questions in the area of his weakness. Both the fast and slow learners are catered for according to their abilities. Individualized teaching for the lesson period in a class of normal size may be unsatisfactory from several points of views. The strongest argument against it is that the students lose the benefit of stimulation through exchange of ideas, of class questioning and learning from one another.

Group Teaching Method:

Since it is always difficult to find a suitable material and method of teaching a class with mixed abilities and as aptitudes; one alternative is to spilt the class into groups so that due attention could be given to each group at a time. This method follows that one group will be taught at a time and while teaching the other group, the first group will continue to practice what had been taught previously. This method brings about closer teacher/students relationship. This is an economical method of teaching when compared with individualized teaching but makes greater demands on the teacher in the matter of preparation and does the whole class teaching method.

Whole Class Teaching Method:

This is traditionally the most common method in practice. The teacher faces a whole class at a time, deliver his lesson and goes away. It is the most common practice but the most difficult because it is not easy to organized lesson period and select teaching materials and methods which will meet the needs of all the students who have mixed aptitudes and abilities. To use the whole class method is to give the whole class the same work at the same time and for the same period of time. Usually the goal of a mixed (whole) class is towards the average. It will them mean that, the more brilliant students (above average) will work below their potential and they can easily be board, while the mediocre (below average students) will be foundering and thereby lose interest through frustration as they may not be able to cope with the pace of lesson delivery.

Discussion Method:

Is a strategy of imparting knowledge through sharing of ideas, opinions, comparing and contrasting news on a given topic, issue or concept between the teacher and the student. The discussion method could be teacher-centered, task-centered or student-centered. The role of the teacher in the discussions should be that of a moderator or facilitator without necessarily influencing the opinions of the students. Discussion could the entire class or groups of students. In whichever way, during the discussion session, the teacher must acknowledge all contributions made by the students. All the students in the groups should be encouraged to actively take part in the discussion and extrovert students should not be allowed to dominate the discussion.

In adopting discussion method, the teacher should note the following points:

1. Question raised should have definite answer
2. Discussion should be based on stated lesson objectives
3. The time available for the lesson
4. Cognitive level of the students
5. Irrelevant contribution by the students should be rejected politely. The teacher should end the discussions as soon as he/she notices lack of interest and boredom among students.

Field Trip:

Not all learning materials are available within the four walls of the classroom or could be brought into the classroom. When this occurs, it is possible to take a trip to areas where such materials could be observed by the students for obtaining specific information. Field trip in form of excursion for the purpose of academic exercise if well planned forms part of effective instruction for meaningful learning. Field trip helps the students to observe, classify, collect data, study relationships and manipulate objects.

Field trip though difficult to plan and time consuming, but provides the student with first hand experiences. The method when carefully applied in the teaching and learning process sharpen the keenness of observational abilities and nurtures that habit of appreciating the orderliness of natural occurrences or events or phenomena. Closer relationship is built between the students and the lecturer, between the school and the community or the relevant establishments. The field trip is meant to maximize learning outcome. In line with this, Ajoma (2009) affirmed that field trip is a method in which students are taken out of the classroom to an industrial or commercial environment to see things for themselves. Ajoma (2009) added that it is a special arrangement between the school and the industrial or commercial personnel for students to visit and get familiar with the operations and machines of these organizations such as production processes relevant to what they have learnt theoretically in the classroom. This method allows

students to concretize their knowledge of what is taught in class, improves school/industry cooperation and generally updates knowledge about the operations of the organizations visited.

Direct Teaching Method (Conventional Teaching Method):

This is a process whereby the teacher gives a talk on a subject to a given group or people especially students. The direct teaching method is one of the channels through which the teachers can communicate with his students. The method is suitable for instruction in commerce but preferably at the advanced level of learning. The method is characterized with listening on the part of the students and that is not too ideal to teach secondary schools students. The chief disadvantage is that it does not encourage students' participation in the lesson and is often referred to as teacher-centered method. Ajoma (2009) described the lecture method as a process whereby teachers give a talk on a subject to students, while the students listen and think about the lesson taught. To her, though the lecture method has the advantage of being useful in a large class and in advanced level of learning, it should not be encouraged in the secondary schools. In the Siagh and Rana (2004), the direct teaching method has received more criticism than any teaching strategy, yet it continues to be used extensively. They believe that the direct teaching method is undoubtedly one or the more efficient means of conveying large quantities of information in short period of time.

Play Way Method:

Yusuf, (2012) described this method as one that was evolved on the basis that students are naturally creative and not just receptive and that self-activity, play freedom and experiences are important ways by which a student learns. Furthermore, freedom and free activity promotes learning, a sort of play in teaching and learning processes will

incorporate them. Play has been referred to as any pleasurable activity. In the play away method, the students learn through play or activity that has a definite purpose. It can take place in the form of games, dramatization, drawing, modeling, etc.

Peer Teaching Method:

This is a method of teaching in which some students, intelligent or good ones, teach their fellow students. In this situation, students who will do the teaching are usually given specific topics to prepare and teach. They are thus placed in the position of teacher and hence they research to get enough information based on specific objectives. When peer teaching takes place, the classroom teacher may be present to hear the teaching exercise. A good advantage of this method is that it tends to improve the students moral communication skills.

Role Playing Method:

The role playing method usually involves the students in dramatization of real life situations. It is a process in which problems are dealt with through action. Usually a problem is identified, acted out, and discussed, with some students playing roles and others observing. In classroom situation, if a problem area is buying and selling, it can be role played by having some learners represent traders and others customers. The teacher provides money and various articles for the role playing exercise. One good thing about this method is that, lesson is made practical and real to life but time consuming when not well planned.

Industrial Co-operative Plan Method:

This is a method that can tremendously assist in the teaching of commerce even at the secondary school level. This plan is a replica of the „‟on-the- job training or

industrial attachment‟‟ for business students in tertiary institutions in Nigeria. This is type of training sometimes referred to as Student Work Experience Scheme (SIWES). The industrial co-operative plan is an arrangement between the school and the industry that will enable students attend training in an industry during the holiday or attend school in the morning and work some hours in the evening in business houses within the community (Ayeduso, 2006).

Project method:

This is a method of teaching, where by learners are in a comprehensive study of certain topics. Project by definition, refers to a task or large-scale exercise given to the students which they may work over an extended period of time. Ajoma (2009) described the project method as a student-centered method of teaching and learning in business education in which learners are allowed a great deal of involvement right from the beginning to the end of the project. The method enhances student‟s full participation and quick assimilation of skills. The use of the project method of teaching can help students to be innovative, thoughtful and creative, since they are fully engaged in the learning process. Ajoma (2009) further stated the advantages of project method of teaching as follows:

* 1. Helping the students to learn through problem solving and
  2. Project work has a strong element of discovery training in it, and learning by discovery is one of the most effective and valuable ways of motivating trainees who will enjoy finding out things for themselves.
  3. Providing the teacher a basis for assessing students learning originality and creativity.
  4. Project method can be very rewarding in terms of achieving behavioural objectives, as they demand knowledge, understanding, discussion and cooperation, analysis, experiment and evaluation.
  5. Projects method can exemplify the principles already discussed in the class.

Discovery method:

This is a method of teaching where the classroom teacher provides the students necessary opportunities to discover new facts, new rules, new methods or techniques for solving problems as well as new values for themselves. Discovery method is also called the “Heuristic method”. The method uses the fact that students can discover things for themselves. The method uses the fact that students‟ own experience is the basis of real learning. It is an activity method where people are mentally active all the time. One of the merits of this method is that, it encourages analytical thought but places a considerable amount of burden on the students since it is student centered (Yusuf, 2012).

The technique adopted by a teacher in his/her teaching depends on his/her preference. According to Felder (2004) teaching techniques are combination of teaching methods and styles that a teacher prefers in his/her teaching, some focus on principles and others on application, some emphasize memory and others understanding. Mishra (2007) discussed the following techniques to any of the methods in use should also be taken into consideration anytime a particular method is applied

Power point Technique:

Power point presentation involves sector-by sector discussion of an identified theme. This is done by utilizing distinct sub-heading as the format. Most power points are cast in form of bullets during teaching and learning processes. The sub-heading

serves as the guide for expanding on the identified dimension of the content. The most typical power point presentation encompasses the following:-

Introduction

Specific of theme to be treated

Development of such sub-themes Additional clarifications

Wrap-up or conclusion,

Question to be tackled or addressed.

Sales Talk Technique:

This is another useful method of teaching business subjects (Commerce and Entrepreneurship Education) at all levels. The business community, that is, commerce and industry have a lot to offer the school. They can benefit from the wealth of experience of entrepreneurs, by inviting them as guest speaker. Such talks can be based on

* + 1. Success stories or otherwise of entrepreneurs,
    2. Latest methods and technology in the field of commerce;
    3. The role of commerce in the economy etc.

Such talks could be of benefit to the teachers and students in such way that: The teacher can update his knowledge about current development in commerce and industry, and as well motivate the students and the teacher to set up their own personal business.

Visual Aids technique:

Pictorial recorded commercial events or activities can be very useful in concretizing theoretical instructions in students mind. Visual aids are real objects, maps,

films, pictures, diagrams, flash cards and any other objects that depict a commercial phenomenon. This method can be adopted in teaching commerce at all levels. It is however recommended for the lower level of education where visualization or seeing what is taught improves better understanding and interest.

Sales Kits Technique:

Sales kits technique is a good technique to use for practicing various greetings and approaches to the customers. The teacher can ask the students to prepare open ended sales kits that set the scene but leave the actual greeting or approach to be used to the

„salesman‟ making the presentation . The classroom can be encouraged to constructively criticize the greeting approach used and suggested alternative way to handle the customers.

Seminar/ Conference Technique:

In this technique, the participant present talks and discussions on topical issues in the management of small-scale business for instance. The group discussion allows the participants to benefit from the ideas and result of the investigations carried out in the field of marketing or business management in generally. Professional bodies like Business Educators Association in Vocational Education (BEAVE), Nigerian Institute of Marketing, Nigerian Institute of Management (NIM), etc. on an annual basis, usually organize the seminars and conferences. Students, Prospective and popular entrepreneurs participate in such programmes and benefit a lot.

E-Learning Technique:

Osuala, (2004) asserted that telephones, televisions, automobiles, and airplanes alone with many other technological developments have revolutionized the way we live,

teach, and play. And computer may ultimately impact more dramatically on our lifestyles than any one or all of the aforementioned inventions we have come to depend on.

## Teaching Methods in Financial Accounting

Methodology in education refers to the principles and the procedures that are made by a teacher in giving instruction to a group of study. Teaching methods are the principles and the techniques that are normally used in the giving of instruction to a teaching population (Osuala, in Awoniyi, 2007). Every successful teacher requires the use of sound methods. Teacher methods are actually ways a teacher passes knowledge, instruction or training to his students. A method of instruction is not affective, if at the end of the instruction, or training there is no appreciable thing to show that the students have learned. It must be emphasized that different teaching-methods exist, and therefore, methods that are appropriate and desirable for one subject/course may not apply to another subject; method to be adopted must be student centered. Learning will be most effective if the methodology used places it is greatly emphasis upon the activities and actions of the students rather than those of the teacher (Awoniyi, 2007). According to Aliyu (2013) methodology is made up of those activities through which teaching becomes effective. "Method is therefore one of the most fundamental aspects of education", and the central problem of teaching.

Research evidence shows that the challenges confronting the secondary education teachers are basically on the methods of imparting knowledge. Teaching, which is primary function of a teacher, entails giving instruction, imparting knowledge, facts, skills, attitudes, interests and aptitude. Teaching therefore starts from the by the families and eventually graduates into the school system if the individual happen to go school. The end result of teaching was taken as the learning which the learner took away from

the event of teaching. Abdulsalam (2006) described teaching as an attempt to help someone change some skills or acquire new attitudes, knowledge, idea or appreciation. Its function include informing, explaining, simulating, directing, guiding and administering the learners, identifying who learn and learning problems, evaluating, reporting and recording the performance of the learners. Mkpa (2009) remarked that teaching is based on methods which at the long run bring about effective teaching. Modebelu and Duvie (2012) opined that teaching involves bringing out or at least facilitating desirable changes in learners. However, effective teaching requires the teacher to step out of the realm of personal experience and step into the world of the learners. Instruction is the transmission to the learner and the acquisition by him on specific skills, information, knowledge or other established data. The mode of instruction or teaching applied in achieving these objectives is referred to as method.

Before learners can imbibe right skills and attitudes, teaching must be effective. Effective teaching according to Mkpa (2009) consists of four elements: purposeful and planned teaching mastery of subject matter, display of conceptual-skills and instructional materials. Ayeduso, (2006) described teaching methods as a particular ways a teacher passes knowledge**,** instruction, or training to his students. As much as possible, this method should be effective. A method of instruction is not effective, if at the end of the instruction or training there is no appreciable thing to show that the students have learned. According to Mkpa (2009) teaching method is the totality of all the strategies, techniques and ways a teacher employs to maximize and facilitate classroom interaction. It is a means of conveyance of facts and decoding messages that eventually result in the realization of stated objectives. Aliyu,(2013) defined teaching methods as the procedures by which the teacher makes the learner at his level, starting with his interest and his problem and they establishes condition that enable him to proceed to reach set goals in as

effective a manner as possible. In all, teaching method is the procedure, orderliness in planning and execution of teaching with appropriate integration of instructional materials to achieve the objectives at the classroom level.

Research evidence showed that the major problem in our schools is the method of imparting knowledge. Ogunu (2000) opined that the children of some ages encountered difficulties when they are instructed using verbal approach. Dada (2000) also revealed that the method presently employed in teaching; in most of business subjects are inadequate or ineffective. It is of a necessary that a skillful teacher needs to be conversant with various teaching strategies which may be applied to subjects at different class situations. (Kiboss and Ogunbiyi, 2007) has singled out the expository approach to be the dominant teaching method commonly used for bookkeeping and accounts instructions in our schools. The expository approach is instruction in which the teacher stands most of the time giving verbal explanations in the form of talk-and-chalk while the students listen and write notes from the chalk-board. Obviously, such inadequate and limited teaching method tends to negatively affect the larceners‟ views of practical concepts and associated methods. Unless urgent measures are taken to curb the problem, the poor performance on financial accounting in Nigeria educational system will continue to persist. Oyovwi (2007) affirmed that many methods of teaching exist in education and these methods are meant to make teacher succeed in their bid to disseminate knowledge. According to Okoli and Egbunonu (2012), academic achievement involves observable and measurable performance of students that take place in the presence of a standard for measuring academic excellence. It is generally observed that teachers can enhance student‟s academic performance by employing different teaching method. In teaching financial accounting, variations in teaching methods are well recognized. Despite the recognition and application of different methods, students‟

poor performance in financial accounting is still being recorded (Olowodun, 2010). He also blamed the problem on accounting teachers‟ insensitivity to the nature of Financial Accounting when planning instructional activities in the classroom. This is because Financial Accounting is not one of the subjects that can be mastered by mere memorization of the basic rules; it requires total determination, sound theoretical knowledge and intensive practice in application. There are several teaching methods that can be employed in the teaching and learning of business subjects such as demonstration, project, field-trip, problem solving, and discussion and lecture methods (Mohammed, Gayus, Oscar and Solomon, 2002). Aliyu (2013) stated the following as applicable methods for effective teaching and learning of business subjects as inductive, deductive, individualized teaching, group teaching, whole class teaching, problem solving, lecture method, industrial co-operative method, seminar/conference method, demonstration, discussion, e-learning, pear teaching, role playing, power point techniques, guided- discovery, project and field trip method. Based on this study, guided-discovery and problem-solving teaching methods will be review.

## Ancillaries to Teaching Methods

Aliu (2013) outlined ancillaries any methods should take into consideration anytime a particular method is applied:

1. Recapitulation: this is not a teaching method by itself but an activity that enhances any method is use. Recapitulation means going through again the important point that have been discussed in the course of the lesson. It should aid understanding rather than memorizing but it emphasizes the significant points learnt.
2. Revision: this means gone over, in fairly good details, the point discussed during the delivering of the lesson. Revision should be meaningful and purposeful. Its aims, objectives and results should be make known to the students. Revision secures long retention and facilitates accurate and speedy recall on subsequent occasions.
3. Exercises: this is trying to put into practice what has been delivered in the lesion.

Exercises should be realistic tasks based on what the teacher has taught the students. Exercises for the students should be designed to give room for feedback. As much as possible exercises should be thoroughly marked by the teacher or some times by the students through the supervision of the teacher.

## Problem-solving Teaching Method in Financial Accounting

Orphan and Ruhan (2006) described problem-solving method of teaching is an active learning process where learners learn according to their own needs and pace. The problem solving method involves the presentation of a problem to the whole class and the entire students are requested to find solution to it. Problem solving is a method of correlating sense, experience and already accepted or established though. It involves identifying the problem, planning alternative behavior that may resolve the problem, activating the most promising of this behavior, evaluating the consequences**,** and applying the process to new problems as they arise. (Awoniyi, 2007). According to Mishra (2007) problem- solving method involves structuring learning around some central questions or typical practical cases in the discipline. However, the instructor‟s task is more elaborate than simply devising good problems. An essential part of helping students solve problems is the creation of an affective climate that is conducive to risk- taking and the free exchange of ideas.

Snyder and Snyder (2008) stated that critical thinking skills are important because they enable students to deal effectively with social, scientific and practical problems. Simply put students who are able to think critically are able to solve problems effectively. Also, Ajoma (2009) opined that problem-solving method is an advanced method of teaching and learning, and it involves making observations. The root of problem-solving learning is found in Dewey‟s thoughts, that learning by experimentation or doing is more lasting (Ali, Hukamdad, Akhter and Khan, 2010). Actually, the problem solving is how to learn independently, it is the most convenient approach to achieve the aims of teaching learning process. Problem-solving method can be referred to as a process of findings answers or approaching solutions creatively. This process requires the learner to be totally involved in the learning process.

Downs (2010) defined problem-solving method as a process of applying previously acquired knowledge to obtain a satisfactory solution to new and unfamiliar problems. The free encyclopaedia Wikipedia (2010) defined problem-solving method as a mental process and is part of the larger problem that includes problem finding and problem shaping. Consider the most complex of all intellectual functions; problem solving has been defined as higher-order cognitive process that requires the modulation and control of more routine or fundamental skills. This means that students need to develop critical thinking abilities to able to solve problems. Aliyu (2013) described problem-solving as a method of instruction that involves the student in problem comprehension, attempted solution, decision-making and the drawing of tentative conclusions in brief, reflective thinking.

The Importance of Problem-solving Teaching Method

The importance of problem-solving method of teaching cannot be over emphasized. The problem-solving method turns students from passive listeners of

information receivers to active, free self-learner and problem solvers. It also shifts the emphasis of educational programs from teaching to learning. Daz-Iefebure (2004), and Kang and Flowren (2004) reported that research supports the premise that lecture and memorization do not lead to long term knowledge or the ability to apply that knowledge to new situations, hence, the importance of the problem-solving method. They further stated that the practice of problem based learning is richly diverse as educators used problem solving method as an educational tool to enhance learning as a relevant and practical experience, to have students‟ problem solving skills and promote students‟ independent learning skill. 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 of teaching. Tick (2007) stated that in the student-centered learning environment that is desirable for problem based learning, the central figure of the learning-teaching process is the student.

Another importance of problem-solving method is noted by Snyder and Snyder (2008) that a problem-solving activity promotes critical thinking and problem-solving skills; active participation in the learning process including self direction, identification of own learning needs, team work, creative discussion, and learning from peers; and the integration and synthesis of a variety knowledge. Snyder and Snyder (2008) opined that critical thinking is what teacher needs to teach their students so as to be able to utilize the problem-solving techniques effectively. Modeling can be demonstrated in a discussion setting, asking a question and “walking students through” the process of critically thinking (Snyder and Snyder, 2008). Snyder and Snyder (2008) identified four barriers which often impede the use of problem-solving method of teaching (i) Lack of training,

(ii) Lack of information, (iii) preconceptions, and (iv) time constraints. Aliyu (2013)

also associated the following merits and demerits to problem-solving method of teaching.

Merits

1. It develops learning readiness and tends to develop initiative, resourcefulness and responsibility
2. Learning objectives are clear when this method is used and it is a method used frequently by students in out of school learning activities.
3. Problem-solving method promotes harmonious relations between teacher and students. Facts and understanding gained through this method are not soon forgotten.
4. Facts and understandings are gained in natural settings. They are gained through application context and the problems can be adjusted to the level of students being taught.
5. Since there is step-by-step progression in having the students solve a series of problems, the teacher can spot the step on which most students seems to be experiencing more difficulty

Demerits:

1. The problem-solving method is time consuming.
2. Slower students appear to learn less well from it than from some of the others methods.
3. It seems to work better with the upper third of the class (some teachers observed that bright students develop solutions, the less able ones merely copy the work done by someone else).
4. The trial-and-error efforts of some of the students frequently degenerated into sessions in which nothing was accomplished and out of which discipline problems grew.

However, for effective selection of appropriate teaching methods, the following factors must be considered according to Mohammed et.al (2002) thus: nature of the subject matter to be taught and the objectives to be attained, time available, number of students, facilities and materials available, interest and the abilities of the teacher and effectiveness of the method.

The Role of Teacher in Problem-solving

The most importance achievement of a teacher is to help his/her students along the road to independent learning. In the use of problem-solving method, the teacher acts just as facilitator, rather than a primary source of information or dispenser of knowledge. Roh (2005) argued that within problem based learning environments, teachers instructional abilities are more critical than in the conventional teacher-centered classrooms. Beyond presenting the subject knowledge to the students, teachers in problem based learning environments must engage students in critical thinking to finding or discover solution to the problem at hand.

Snyder and Snyder (2008) said that critical thinking is what teachers need to teach their students so as to be able to utilize the problem-solving techniques effectively. Davis, Riley and Fisher (2003) observed that although business education students perceive critical thinking as an important skill, they typically do not know how to think critically. Students are not born with the ability to think critically. Therefore instructors who wish to integrate this skill in their classroom experiences must first model the behaviour (Okoli, 2013). Students must learn how to think critically before they can apply the skill to content scenarios. Modeling can be demonstrated in a discussion setting

by asking a question and “walking students through” the process of critically thinking (Snyder and Snyder, 2008).

Okoli (2013) also focused on integrating questioning techniques into class discussions to support an educational environment where students can demonstrate and practice critical thinking skills. Sample questions from all these studies include the following:

* 1. What do you think about this?
  2. Why do you think that?
  3. What is your knowledge based upon?
  4. What explains it, connects to it, leads to it?
  5. What does it imply and presuppose?
  6. How are you viewing it?
  7. Should it be viewed differently?

These questions require students to evaluate the clarity and accuracy of their thinking as well as the depth and breadth of their thinking. To Bhardwaj (2000) Wood‟s problem solving model can be adopted. It is as follows:

1. defined the problem
   1. the system: Have students identify the system under study by interpreting the information provided in the problem statement. Outline a sketch of accounting format is a great way to do this.
   2. knowledge and concepts: List what is known about a problem, and identify the knowledge needed to understand (and eventually) solve it.
   3. Unknown(s): Once you have a list of known, identifying the unknown(s) becomes simpler. One unknown is generally the answer to the problem, but there may be other unknowns. Be sure that students understand what they are expected to find.
   4. units and symbols: One key aspect in problem solving is teaching students how to select, interpret, and use units and symbols. Emphasize the use of units whenever applicable.
   5. constraints: All problems have some stated or implied constraints. Teach students to look for the words only, must, neglect, or assume to help identify the constraints.
   6. criteria for success: help students to consider from the beginning what a logical type of answer would be. What characteristics will it possess?
2. Think about it.
3. “let it simmer” use this stage to ponder the problem.

Ideally, students will develop a mental image of the problem at hand during this stage

1. identify specific pieces of knowledge: students need to determine by themselves the required background knowledge from illustrations, examples and problems covered in the course.
2. Collect information: encourage students to collect pertinent information.
3. Plan a solution.
   1. Consider possible strategies: Often, the type of solution will be determined by the type of problem. Some common problem-solving strategies are: compute;

simplify; use an equation; make a model, diagram, table or chart; or work backwards.

* 1. Choose the best strategies: help students to choose the best strategy by reminding them again what they are required to find or calculate.

1. Carry out the plan.
   1. Be patient: Most problems are not solved quickly or on the first attempt. In other cases, executing the solution may be the easiest step.
   2. Be persistent: If a plan does not work immediately, do not let students get discouraged. Encouraged them to try a different strategy and keep trying.
2. Look back: encourage students to reflect. Once a solution has been reached, students should ask themselves the following question:
   1. does the answer make sense?
   2. does it fit with the criteria established in step 1?
   3. did I answer the question(s)?
   4. what did I learn by doing this?
   5. could I have done the problem another way?

This last step of looking back or reflecting is a very important aspect of the model and as such students should give more attention to it. According to Down (2010) the period after a problem has been solved has been identified as a key moment in time when significant learning can take place. It is what you do after you have solved a problem that really determines how much you learn from a problem.

## Guided-discovery Teaching Method in Financial Accounting

According to Nwagbu (2007) Guided discovery is an approach to enquiry in which the teacher provides illustrative materials for students to study on their own. Leading questions are then asked by the teacher to enable students think and provide conclusion through the adoption of the processes of sciences. Ogheneuwede (2010) maintained that a learner is active in discovery learning, and provides for individual differences as well as makes the process of learning to be self-sequenced, goal directed, with the goal perceived and the pace self-determined. Guided Discovery is a teaching technique that encourages students to take more active role in the learning process by answering series of questions or solving problems designed to introduce o general concept (Mayer in Ezeaghazi, 2013). In Guided discovery, students received problems but the teacher provides hints and directions about how to solve the problem to keep the students on track (Gallenstien, 2004). However, Ezeaghazi (2013) posited that it is a student‟s centered activity oriented teaching strategy in which teacher guides the students through problem solving approach to discover answer to instructional topics at hand.

The Importance of Guided-discovery Teaching Method

Awoniyi (2007) revealed merits of guided- discovery teaching method as; it provides for understanding as opposed to learning, the students are actively engaged in the process of acquiring knowledge instead of being a passive listener, students are taught principles which are more easily remembered than isolated facts and students are more interested in and retain better things they have found out for themselves. Guided- discovery involves helping learners to discover certain facts or answers to a given problem. Learners most often depend on their teachers to provide all answer they need. Guided-discovery also involves inquiry method that stimulates learners‟ interest in

seeking information about ideas and concepts by asking questions. Guided-discovery drills learner and enables learners search for knowledge in a systematic and logic way. Guided-discovery promotes independent reasoning and self-reliance while the teacher guides, directs and re-directs which can leads the learners to the answers. Guided- discovery is time consuming and expensive but helps learners develop skills of observation, exploration and questioning. Guided-discovery promotes active participation, team work cooperation and tolerance among learner (Modebelu and Duvie, 2012).

This is a method of teaching where the classroom teacher provides the students necessary opportunities to discover new facts, new rules, new methods or techniques for solving problems as well as new values for themselves. The discovery method is also called the “Heuristic method”. The method uses the fact that students discover things for themselves. The method uses the fact that students own experience is the basis of real learning. It is an activity method where people are mentally active all the time. One of the merits of this method is that, it encourages analytical thought but places a considerable amount of burden on the students since it is student centered and it is also time consuming (Yusuf, 2012).

## Review of Related Empirical Studies

This section reviewed empirical studies related to this study.

Olowodun (2010) carried out a study on strategies for effective teaching of financial accounting in senior secondary schools in Kaduna state, the study adopted descriptive survey design, using 14 items questionnaire to elicit information from 105 accounting teachers in 70 senior secondary schools in five 5 education inspectorate divisions in Kaduna state. Two specific objectives, two research questions and two null

hypotheses were developed for the study. t-test was used in testing the null hypotheses. The study found out that Learning activity must be well planned so as to achieve their objectives of ensuring adequate consideration for learners‟ level of maturity and ability, using well designed instructional materials

Though, the study aimed at improving the effective teaching of financial accounting in senior secondary schools, it did not place emphasis on students participation. Only accounting teachers was used in the study to elicit information. The researcher would have used both teacher and students so as to be able to generalize the results as in the case of the present study.

Umar (2010) investigated whether the inquiry (guided-discovery) method of teaching had significant advantage over exposition (conventional) method of teaching financial accounting in secondary school students in Zaria Township in Kaduna state, Nigeria. The researcher collected data from a sample of forty-two (42) students out of a total population of one hundred and eighty-seven (187) students. The researcher answered four research questions and four null hypotheses were tested. Descriptive statistics as frequency counts, mean and percentage were used to answer research questions while inferential statistics such as t-test and z-test were used to test the four null hypotheses at 0.05 level of significant. The researcher used pre-test and post-test approach, the researcher determined whether there was any significant difference in the mean achievement of the experimental group (taught with inquiry method) and that of control group (taught with conventional method). Furthermore, the researcher investigated the difference in the performance of male and female students in both experimental and control group.

1. It has been revealed from the findings that the students in both experimental and control group performed better in the post-test than pre-test.
2. The result of the findings also indicated that there were significant differences between the pre-test and post-test mean performance of the students in Financial Accounting.

The ongoing research study is similar to past research study as the study examine the effects of problem-solving and guided-discovery on student‟s academic performance in financial accounting in secondary schools. The studies differ in specific objectives, research questions, null hypotheses and scope of the study. The study conducted by Umar (2010) was actually a good one except for the use of only Zaria Township which was a small area. The researcher would have used the whole Kaduna state so as to be able to generalize the results. The scope of the study is the gap the present study filled.

Okoli (2011) conducted a research on comparative study of using problem- solving and teacher-demonstration methods on student‟s performance in financial accounting in secondary schools in Gombe state Nigeria. The study had four specific objectives, research questions and related null hypotheses. The study adopted quazi experimental research design. The study used the population of students of the eleven public secondary schools offering financial accounting in Gombe state which stood at 1753 and the sample size for the study was ninety. Purposive sampling technique was used for the selection of three secondary schools for the experiment and descriptive statistics of frequency distribution and percentage was used for analyzing personal data of the respondent. The study answered research questions using mean and standard deviation. Independent t-test, ANOVA and LSD Post Hoc multiple comparisons were used to test null hypotheses at 0.05 level of significant.

1. The findings revealed among others that there was significant difference in the performance of students taught with problem-solving method and those taught with Conventional method in Financial Accounting.
2. The study further revealed that there was a significant difference between the performances of students taught with Teacher-demonstration method and those taught with conventional method in financial accounting.

The study recommended among others that teachers should intensify effort in the use of teacher-demonstration method in teaching financial accounting in secondary schools. The present study closely related to the previous research study and only differs in population of the study because past study covers view number of secondary schools while the present study covers the whole state as the gap filled.

Ibrahim (2011) conducted a research on impact of accounting background, gender and motivation on performance of business education students in introductory accounting in federal universities in Nigeria. The study adopted quasi-experimental research design, population for the study comprised of one hundred and eleven (111) 100 level business education students from eight (8) federal universities offering business education in Nigeria. Three federal institutions namely: Ahmadu Bello University, Zaria, Kaduna State, University of Benin, Benin-City, Edo State and University of Nigeria, Nsukka, Enugu State were used as sample. The study utilized FAAT as instrument for data collection which is of two parts, that is, pre-test and post-test items. Frequency distribution, mean, mode and percentage were used to analyze data of demographic variable. Independent t-test was used to test null hypotheses.

1. The research findings reviewed, among others, was that gender did not, however, have any positive impact on student‟s performance.
2. Based on research findings, five recommendations were made one of which was that, student‟s wrong perception of accounting as a difficult subject should be discouraged by teachers, guidance, counsellors and parents.

The present study is similar to Ibrahim‟s study as both studies employed financial accounting achievement test (FAAT) as an instrument for data collection and the experimental group for both studies comprised three groups. Meanwhile, the present study differs from the study being reviewed in that; the study was on secondary school students offering financial accounting whereas the study being reviewed carried out at tertiary institutions. The target population for the present study comprised of all SS II secondary school students both male and female taking financial accounting from three hundred and fourty-three public senior secondary schools in Kwara state. Also, the present study used two types of statistical tools to test the null hypotheses and the past study under reviewed adopted one statistical method in testing null hypotheses which serve as gap which was filled in the present study.

Ibe (2013) investigated the effects of guided-discovery and expository teaching methods on students‟ performance and interest in Biology. It has been discovered that Students‟ performances in the sciences (Biology) have been below expectation. The performances of the students in the Research-Made Test (RMBT) using expository method and guided-discovery were compared and the interests of the two groups were also compared. Purposive samples of eighty-four (84) SS II senior secondary school students were drawn from two intact classes in co-educational secondary schools in Imo State. Two instruments were used for the study namely: Biology Achievement Test (BAT) and Biology Interest Scale (BIS).

The reliability of BAT was established at 0.78 using Kuder-Richardson (K-R 20) statistics and reliability of Biology Interest Scale (BIS) was calculated with Cronbach Alpha. The research questions were answered using Mean and Standard deviation while null hypotheses were tested by Analysis of Co-variance (ANCOVA) at 0.05 level of significant.

1. The major findings of the study indicated that two methods have significant effect on students‟ performances in Biology.
2. The results of the findings also revealed that students taught with guided- discovery performed better than those exposed to expository methods of teaching in Biology.
3. It is also concluded that female students performed better than male students in (RMBT) this is because the female students had higher level of interests in (RMBT) than the male students.
4. The researcher recommended among other that Biology teachers and Science teachers in general should Endeavour to apply these teaching methods when presenting Biology and Science materials to the students in the classroom.

The present research study similar to past research study because both studies employed two independent variables for the experiments i.e past researcher examined expository and guided-discovery methods on students performance, likewise the present researcher does (problem-solving and guided-discovery). The study differs in subject areas because past researcher examined the performance of students in Biology while current researcher assessed the performance of the students in financial accounting. The study conducted by Ibe (2013) was actually a good one except for the use of purposive sampling technique to select (84) SS II senior secondary school students across the Imo state. The researcher would have purposively select two to three senior secondary

schools for the experiment to avoid intervening variables which may likely affect the researcher findings. This was the gap filled by the present researcher. The present researcher was benefit from past research study in the area of data collections and data presentation and analysis. It also contributed to the progress of ongoing research study in research design and methodology aspects.

Enwere and Enwere (2014) carried out research study titled the effect of “Just-in- Time teaching and conventional teaching methods on students‟ academic achievement in financial accounting in Akwa educational zone in Anambra State, Nigeria. The study sought to establish the effect of using “just-in-time teaching (JIIT) and conventional teaching method (lecture method) on students‟ academic achievement in financial accounting. Two research questions guided the study while two hypotheses were tested. Quasi experimental research design was adopted. The sample of the study comprised two hundred and sixty-seven (267) respondents made up of one hundred and fourteen (114) male and one hundred and fifty-three (153) female students in Akwa educational zone. Simple random sampling techniques were used to select two secondary schools from each of the three local government areas in Akwa educational zone. All SS II students offering financial accounting in the selected schools were purposively chosen for the study. One school from each of the three local government areas was selected and assigned to experimental group while one school again from each of the local governments was also selected and assigned to control group.

The pre-test and post-test were administered to both the control and experimental group. JIIT method was used to teach the experimental group while control group was taught the same lesson using conventional method. The researchers developed questionnaire whose reliability index was found to be 0.78 using the Cronbach formula.

The research question was answered using mean score and standard deviation while hypotheses were tested at 0.05 level of significance using ANCOVA.

1. It found that the achievement grades of students taught financial accounting using JIIT method are greater than those taught using conventional method.
2. In line with the findings, the researchers recommended among others that JIIT should be formally adopted for instruction in secondary schools in order to improve students‟ performance.

The present research study similar to past research study in area of discipline and target population. The studies differs in independent variables used by both researchers

i.e past researcher examined just-in-time teaching and conventional teaching methods while present researcher assessed the effects of problem-solving and guided-discovery on students performance in financial accounting both at the secondary school level. The study conducted by Enwere and Enwere (2014) was actually a good one except for the use of only one educational zone which was a small area. The researcher would have used the whole Anambra State so as to be able to generalize the results. The scope of the study is the gap the present study was filled. Past research study contributed to the progress of current research study in research design and methodology.

Idoko (2015) carried out a research study on effects of guided-discovery and demonstration methods of teaching on academic performance of secondary school students in financial accounting in Benue state Nigeria. The study used one thousand six hundred and sixteen (1616) SS 2 students both male and female of all public senior secondary schools offering financial accounting as population. The study used one hundred and fourty four as sample size. The study adopted a quazi–experimental research design. The study used Self-developed Financial Accounting Performance Test

(FAPT) and Financial Accounting Evaluation Test (FAET) as instrument for data collection. The study used percentage in analyzing the bio-data and t-test was used in testing the null hypotheses.

1. The findings revealed among others that the students performed better in financial accounting when guided-discovery and demonstration methods of teaching were used than when lecture method of teaching was used.
2. They study concluded that students performed better in financial accounting when guided-discovery and demonstration methods of teaching were used than when lecture method of teaching was used.
3. The study recommended among others that guided-discovery method of teaching should be instituted in the teaching and learning of financial accounting in secondary schools by curriculum planners through school inspection and supervision in order to engaged students in problem-solving activities.

The present study is closely related to the past research study because both studies used quazi-experimental research design and differ in the instrument for data collection and this contributed to the success of the present study.

## Summary of Reviewed Literature

In course of review of related literature under several sub-headings, the constructivism teaching and learning theory and experiential learning theory on which the study is based was fully examined. Literatures related to study were also reviewed and these were done in stages sequentially. The concept of Financial Accounting from diverse authors across the globe was highlighted. From their different ends, they have common view and ideas of Financial Accounting which is on all financial transactions of an individual or organization. The review looked at the historical development of

accounting from inception to the present practice. It was observed that Accounting is as old as man. In Nigeria, it was being with us before amalgamation and the practice today is being regulated by two recognized bodies which are Institute of Chartered Accountants of Nigeria (ICAN) and Association of Nigeria Accountants of Nigeria (ANAN). The review also examined the users of Accounting in information and the importance of accounting information to its users; it was observed that accounting information is very essential to various groups in making financial decisions and objective assessment. Literature regarding accounting concepts and conventions as set out in Statements of Accounting Standards (SAS1) issued by the Nigerian Accounting Standards Board (NASB) was also reviewed.

Teaching methods in financial accounting from diverse authors and researcher was reviewed. It was revealed that they have common view and idea of methods of teaching as a particular ways a teacher passes knowledge**,** instruction, or training to his students. As much as possible, this method should be effective. A method of instruction is not effective, if at the end of the instruction or training there is no appreciable thing to show that the students have learned. An applicable different method of instruction for financial accounting as suggested by diverse authors was also looked at where several opinions of authors were examined. Guided-discovery, Problem-solving and direct teaching methods (conventional teaching method) were reviewed and their importance cannot be over emphasized and under estimated in the teaching and learning process of financial accounting at secondary schools level. It was observed that without the use of appropriate and suitable teaching methods, understanding financial accounting at secondary schools level becomes very difficult to the learner and resulted to students‟ poor academic performance.

From the foregoing, therefore, it can be observed that none of the previous studies reviewed combined and compared problem-solving and guided-discovery teaching methods as against the use conventional direct method of teaching. Instead, only few of these previous studies dwelt into comparison of either of the two teaching methods above - problem-solving and guided-discovery teaching methods with the conventional direct teaching method in efficient teaching of financial accounting in senior secondary schools in Kwara state, the gap which the study has bridged.

# CHAPTER THREE RESEARCH METHODOLOGY

This chapter outlined the specific methods and procedures that were adopted in this study. The chapter was organized under the following sub-headings:

* 1. Research Design
  2. Population of the Study
  3. Sample Size and Sampling Procedure
  4. Instrument for Data Collection
     1. Validation of the Instrument
     2. Pilot Study
     3. Reliability of the Instrument
  5. Procedure for Data Collection
  6. Procedure for Data Analysis

## Research Design

This research work was conducted using quasi-experimental research design, because the study lacked randomization. This is in agreement with the views of with Baba (2005) that a quasi-experimental design is used when a study lacks randomization. The design, according to Sambo (2008) is used by researchers outside the full laboratory settings.

## Population of the Study

The population of the study was nineteen thousand two hundred and thirty eight (19,238) SS II commercial students in three hundred and fourty seven public senior secondary schools in sixteen Local Government Areas of Kwara State taking financial

accounting in the 2015/2016 academic session. Table 1 Show the breakdown of the population of the study.

## Table 1: Population of the Study

|  |
| --- |
| **S/No Local Governments Number of Schools Number of Students** |
| 1 Asa 24 984   1. Baruteen 17 643 2. Edu 19 821 3. Ekiti 15 698 4. Ifelodun 44 2122 5. Ilorin-East 28 2519 6. Ilorin-South 22 1841 7. Ilorin-West 28 2954 8. Irepodun 40 1692 9. Isin 16 612 10. Kaima 10 351 11. Moro 21 876 12. Offa 13 1202 13. Oke-Ero 14 535 14. Oyun 19 702 15. Patigi 17 686 |
| **Total 347 19,238** |

Source: Ministry of Education, Ilorin, 2015

## Sample Size and Sampling Procedure

Purposive sampling procedure was used to select Okelele senior secondary school, Ilorin, Ilorin-South senior secondary school and Ero-Omo senior secondary school, Ilorin. The schools were selected within Ilorin to enable the researcher conduct the experiment more effectively. From the three schools, a total of one hundred and twenty (120) SS II business students taking financial accounting in the 2015/2016

academic session were selected using random sampling method as the sample are randomly assigned to both experimental and control groups (fourty students for each group) using balloting system. This was done to make the groups of manageable sizes for the experiment. This is in line with the opinion of Yusuf (2013) who suggested usage of a small sample size from the target population in an experimental research design.

## Table 2: Sample Size of the Study

|  |
| --- |
| **S/No Name of Schools Number of Students Remarks** |
| 1. Okelele Secondary School, Ilorin 40 Experimental Group I 2. Ilorin-south Secondary School, Ilorin 40 Experimental Group II 3. Ero-omo Secondary School, Ilorin 40 Control Group |
| Total 120 |

Source: Field survey, 2016

The procedure for selecting the fourty students from Okelele Senior Secondary Schools, Ilorin, as experimental group I was the balloting method. The researcher wrote fourty „Yes‟ and 181 „No‟ on pieces of paper. The papers were folded and put in a hollow container and shuffled very well before the students were asked to pick one each. The same procedure was used for the selection of fourty students from Ilorin-South Senior Secondary School, Ilorin and the Ero-Omo Senior Secondary School, Ilorin.

## Instrument for Data Collection

Financial Accounting Achievement Test (FAAT) was used as instruments for data collection. The instrument was divided into two types, pre-test and post-test. The pre-test instrument contained twenty (20) items multiple choice objective questions with

(4) options A-D each, which was centered on cash book, general principle of double entry book-keeping, trading account, depreciation account and manufacturing account

with four (4) items multiple objective questions on each sub-topic, it lasted for twenty minutes (appendix II), the marking scheme of the pre-test (appendix III). The second type of the instrument was post-test (appendix IV). The instrument was administered to collect data after teaching the students with problem-solving and guided-discovery teaching methods as against the use of conventional direct teaching method; the instrument was also administered to determine the effects of the selected methods of teaching.

The test asked the students to define partnership accounts, list partnership agreement deed, and prepare partner‟s profit and loss appropriation account and partner‟s current accounts from a list of balances. The questions were drawn from WAEC and NECO past senior certificate examination question papers from 2009 to 2014 for both pre-test and post-test. Financial Accounting Instructional Package (FAIP) “Lesson Plan” was also used for the actual periods of teaching. Nine (9) financial accounting instructional packages (lesson plan) were prepared and used as a guide for each of the lesson period.

## Validation of the Instrument

The instrument was based on question items picked from past WAEC and NECO question papers. It is the belief of the researcher that this past question papers were validated by the various examination bodies before they were administered. Validation of content of an instrument by experts is an important and acceptable validation (Odekunle, 2013). The instrument was also subjected to vetting and evaluation by the researcher‟s supervisors and two other lecturers in the Department of vocational and technical education, Ahmadu Bello University, Zaria, not below the rank of senior lecturer. Suggested modifications on the test items were effected before the

administration of the instrument. This is in line with the advice of Odekunle (2013) who remarked that validation of research instrument should be done before administration.

## Pilot Study

A pilot study was conducted at Ibrahim Muazu Commercial College, Kontagora, Niger State using twenty students. Both pre-test and post-test component of the instrument were administered to SS II commercial students offering financial accounting. This is because the school had a set of SS II business students taking financial accounting as part of the business core subject which was in line with researcher target population and also the school was outside the Kwara States covered by the study but they shared similar characteristics with that of the study area. The data collected were subjected to statistical test to determine coefficient correlation.

## Reliability of the Instrument

The test and re-test method was used in testing the test items for the reliability coefficient. The data obtained from the pilot study were subjected to statistical analysis using Kuder Richardson 21(KR – 21) formula. The reliability coefficient obtained was 0.76, which indicated that the instrument was valid and reliable. Odekunle (2013) remarked that reliability coefficient of 0.5 and above means the instrument is valid and reliable.

## Procedure for Data Collection

The researcher collected a letter of introduction from the Department of vocational and technical education, Ahmadu Bello University, Zaria, (appendix I) which was used to introduce the researcher to the authorities of the selected secondary schools. The data collection period lasted for five (5) weeks. The first week was purposely used

for familiarization with sampled students and assessment of the students‟ previous knowledge in financial accounting before the treatment exercise and administering of pre-test to the students lasted for twenty minutes for each of the three groups. In second week, sampled students were exposed to treatment on the concepts of partnership accounts and partnership agreement (deed) with the use of problem-solving teaching method for experimental group I, guided-discovery teaching method for experimental group II and conventional direct teaching method for control group lasted (80) minutes for each of the three groups.

For the third week, students were taught preparation of partnership profit and loss appropriation accounts from net trading, profit and loss account for the year ended using problem-solving teaching method for experimental group I, guided-discovery teaching method for experimental group II as against the use conventional direct teaching method for control group lasted (80) minutes for each of the three groups, while fourth week was used to teach students preparation of partners‟ capital and current accounts to reflect partners‟ share of profits or losses with same procedures, making a total of six periods for each of the three groups. Finally, the last fifth week was used to administer the post- test. Instructional package for financial accounting (IPFA) „lesson plan‟ were prepared for the actual periods that were used in the teaching (appendices VI – XIV). Teaching was carried out in accordance with the selected schools time-table, time allocated to financial accounting. This was done so as not to disrupt other subjects‟ periods. The scripts were collected, marked, scored and recorded using post-test marking scheme (appendix V).

## Procedure for Data Analysis

Frequency percentage was used in analyzing bio-data of students. Mean and standard deviation was used to answer the research questions. Pearson product moment correlation coefficient was used to test null hypotheses one and two. This decision was based on the opinion of Odekunle (2013) who opined that PPMC should be employed to determine the relationship between dependent variable on independent variable and T- test was used to test null hypotheses three, four and five. T-test was considered appropriate for analyzing the difference between the mean of two groups variable. (Ibrahim, 2013) All null hypotheses were tested at 0.05 levels of significance.

For the research questions, the pass mark was 50% which considered as average pass marks for the study. A mean score of 50% and above meant that particular experimental teaching method had effect and a mean score below 50% meant that particular experimental teaching method had no effect. Null hypothesis were rejected where the calculated value was greater than critical value. On the other hand, the null hypotheses were retained where the calculated value was equal to or less than the critical value.

# CHAPTER FOUR

**DATA PRESENTATION AND ANALYSIS**

The analysis of data was done under the following headings:

* 1. Analysis of Demographic Data
  2. Answers to Research Questions
  3. Test of Null Hypotheses
  4. Summary of Major Findings
  5. Discussion of Findings

The demographic variables of the students considered in the study were the gender and age of the students. These are shown in Tables 3 and 4

## Analysis of Demographic Data

Analysis of the demographic variables of the students presented in Tables (3 and 4)

## Table 3: Distribution of students by gender

|  |
| --- |
| **Gender Frequency Percentage (%)** |
| Male 66 55  Female 54 45 |
| Total 120 100 |

Source: Field Work, 2016

The data in Table 3 showed that 55% of the students were males, and 45% were females. This indicated that students were distributed in mixed school used for the experiment.

## Table 4: Distribution of students by age

|  |
| --- |
| **Age Range in Years Frequency Percentage (%)** |
| 16 - 18 45 52.5  13 - 15 63 37.5  19 - 21 12 10.0 |
| Total 120 100 |

Source: Field Work, 2016

The age range in years indicated in Table 4.2 showed that, 52.5% of the students were between 16 – 18 years old, 37.5% were between 13 – 15 years, while 10.0% were

between 19 – 21 years old.

## Answers to Research Questions

Results of post-test students‟ performance in Financial Accounting Achievement Tests (FAAT) were used to answer the five Research questions. The analyses are presented in Tables 5 to 9

**Research Question One:** What is the effect of problem-solving teaching method on

performance of secondary school students in financial accounting in Kwara State, Nigeria?

The effect of problem-solving teaching method on the performance of secondary school students in financial accounting was compared with students in the direct teaching method (conventional teaching method) to determine its efficacy in enhancing the academic performance of the students.

## Table 5: Mean and standard deviation showing distribution of senior secondary school students taught financial accounting using problem-solving and direct teaching methods

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Method | N | Mean | STD | Mean Diff. |
| Problem-solving | 40 | 52.40 | 18.08 |  |
|  |  |  |  | 11.65 |
| Direct teaching | 40 | 40.75 | 16.71 |  |

Source: Field Work, 2016

The result in Table 5 revealed that the group taught using Problem-Solving teaching method had mean performance of 52.40 and standard deviation of 18.08. On the other hand, students taught using conventional direct teaching method had mean performance of 40.75 and standard deviation of 16.71. With mean difference of 11.65, this means that problem-solving teaching method was effective than the use of conventional direct teaching method. **The summary of the result showed that problem-solving teaching method had effect on performance of senior secondary school students in financial accounting.**

**Research Question Two:** What is the effect of guided-discovery teaching method on

Performance of secondary school students in financial accounting in Kwara State, Nigeria?

The effect of guided-discovery teaching method on the performance of secondary school students in financial accounting was compared with that of the direct teaching method (conventional teaching method) to determine its efficacy in enhancing the academic performance of the students.

## Table 6: Mean and standard deviation showing distribution of senior secondary school students taught financial accounting using guided-discovery and direct teaching methods.

|  |  |  |  |
| --- | --- | --- | --- |
| Method | N | Mean | STD Mean Diff. |
| Guided-discovery | 40 | 56.75 | 17.97  16.00 |
| Direct teaching | 40 | 40.75 | 16.71 |

Source: Field Work, 2016

The result presented in Table 6 revealed that the group taught using Guided- discovery teaching method had mean performance of 56.75 and standard deviation of

17.97. On the other hand, those taught using direct teaching method had mean performance of 40.75 and standard deviation of 16.71. With mean difference of 16.00, this means that guided-discovery teaching method was effective than the use of conventional direct teaching method. **The breakdown of the result showed that guided-discovery teaching method had effect on performance of senior secondary school students in financial accounting.**

**Research Question Three:** What is the difference in the effect of problem-solving and

guided-discovery teaching methods on performance of senior secondary school students in financial accounting in Kwawa state, Nigeria?

The efficacies of the two experimental methods (guided-discovery and problem- solving teaching methods) used in the teaching of financial accounting were compared here, to determine the one that has greater effect the enhancement of the students‟ academic performance in financial accounting. The mean performances of the two groups in financial accounting are summarized in Table 7 along with their corresponding standard deviations.

## Table 7: Mean and standard deviation showing distribution of senior secondary school students taught financial accounting using Problem-solving and guided- discovery teaching methods

|  |  |  |  |
| --- | --- | --- | --- |
| Method | N | Mean | STD Mean Diff. |
| Problem-solving | 40 | 52.40 | 18.08  4.35 |
| Guided-discovery | 40 | 56.75 | 17.97 |

Source: Field Work, 2016

The result in Table 7 revealed that students taught financial accounting using problem-solving teaching method had mean performance of 52.40 and standard deviation of 18.08. On the other hand, those taught using guided-discovery teaching method had mean performance of 56.75 and standard deviation of 17.97. Thus, with the mean scores performance of 52.40 for Problem-solving teaching method as against 56.75 for guided- discovery teaching method, it indicated that students taught financial accounting using guided-discovery teaching method performed relatively higher than those taught using problem-solving teaching method in financial accounting with mean difference of 4.35

**Research Question Four:** What is the difference in the effect of problem-solving and

guided-discovery teaching methods on performance of male senior secondary school students in financial accounting in Kwara State, Nigeria?

## Table 8: Mean and standard deviation showing performance of senior secondary school male students taught financial accounting using problem-solving and guided-discovery teaching methods.

|  |  |  |  |
| --- | --- | --- | --- |
| Methods | N | Mean | STD Mean Diff. |
| Male Problem-solving | 22 | 58.59 | 18.14  3.82 |
| Male Guided-discovery | 22 | 62.41 | 18.08 |

Source: Field Work, 2016

The outcome of Table 8 revealed that male students taught financial accounting using problem-solving teaching method had mean performance of 58.59 and standard

deviation of 18.14. Those taught using guided-discovery teaching method had the mean performance of 62.41 and standard deviation of 18.08. This means that guided-discovery teaching method was more effective on male student‟s performance than the use of problem-solving teaching method with mean difference of 3.82

**Research Question Five:** What is the difference in the effect of problem-solving and

guided- discovery teaching methods on performance of female senior secondary school students in financial accounting in Kwara State, Nigeria?

## Table 9: Mean and standard deviation showing performance of senior secondary school female students taught financial accounting using problem-solving and guided-discovery teaching methods.

|  |  |  |  |
| --- | --- | --- | --- |
| Methods | N | Mean | STD Mean Diff. |
| Female Problem-solving | 18 | 44.83 | 15.29  5.00 |
| Female Guided-discovery | 18 | 49.83 | 15.67 |

Source: Field Work, 2016

The result presented in Table 9 revealed that the group taught financial accounting using problem-solving teaching method had mean performance of 44.83 and standard deviation of 15.29. On the other hand, those taught using guided-discovery teaching method had mean performance of 49.83 and standard deviation of 15.67. This means that guided-discovery teaching method was more effective on female student‟s performance than the use of problem-solving teaching method with mean difference of 5.00.

## Test of Null Hypotheses

This study tested five null hypotheses. The post-test scores of the students‟ were statistically analyzed at the 0.05 level of significance and the results interpreted. For null

hypotheses one and two, Pearson Product Moment Correlation Coefficient (PPMC) was used while t-test statistics was used to test null hypotheses three, four and five.

**Null Hypothesis One:** Problem-solving teaching method has no significant effect on the performance of secondary school students in financial accounting

## Table 10: Pearson product moment correlation showing effect of problem-solving teaching method on performance of senior secondary school students in financial accounting

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Method | N | Df | Mean | STD. | r-cal | r-crt. | p-value |
| Problem-solving | 40 |  | 52.40 | 18.08 |  |  |  |
| Direct teaching | 40 | 78 |  |  | .775 | .088 | 0.000 |
| 40.75 | 16.71 | |  |  |

Source: Field Work, 2016

The result of the data used to determine the effect of problem-solving teaching method on performance of senior secondary school students in financial accounting as against the use of conventional direct teaching method in financial accounting in Kwara state, presented in Table 10 revealed that the r-cal was 0.775 and the r-crit was 0.088. The p-value obtained was 0.000, which was significant at 0.05. Since the observed level of significant for the test was 0.000 (P < 0.05). This means that, the null hypothesis that Problem-solving teaching method has no significant effect on performance of senior secondary school students in financial accounting was therefore rejected. It was observed here that problem-solving teaching method had significant effect on performance of secondary school students in financial accounting.

**Null Hypothesis Two:** Guided-discovery teaching method has no significant effect on the performance of secondary school students in financial accounting

To test null hypothesis two, post-test scores of students taught using guided- discovery teaching method as against the use of conventional direct teaching method were computed using Pearson product moment correlation (PPMC) at 0.05 level of significance as seen in Table 11

## Table 11: Pearson product moment correlation showing effect of guided-discovery teaching method on performance of senior secondary school students in financial accounting

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Method N Df | Mean | Std.Dev. | r-cal | r-crt. | p-value |
| Guided-discovery 40 | 56.75 | 17.97 |  |  |  |
| 78  Direct teaching 40 |  |  | .640 | .088 | 0.000 |
| 40.75 | 16.71 | |  |  |

Source: Field Work, 2016

The result of the data used to determine the effect of guided-discovery teaching method on performance of senior secondary school students in financial accounting as against the use of conventional direct teaching method in financial accounting in Kwara state was presented in Table 11. The analysis revealed that the r-cal was 0.640 and the r- crit was 0.088. The p-value obtained was 0.000, which was significant at 0.05. The observed level of significant for the test was 0.000 (P < 0.05). This means the null hypothesis stated that guided-discovery teaching method has no significant effect on performance of senior secondary school students in financial accounting was therefore rejected. It was observed here that guided-discovery teaching method had significant effect on performance of secondary school students in financial accounting.

**Null Hypothesis Three:** There is no significant difference in the effect of problem-

solving and guided-discovery teaching methods on performance of secondary school students in financial accounting

To test null hypothesis three, post-test scores of students taught using problem- solving teaching method and those taught using guided-discovery teaching method. The scores were analysed using t-test at 0.05 level of significant as presented in Table 12.

## Table 12: t-test Analysis showing difference on performance of senior secondary school students taught financial accounting using problem-solving and guided-discovery teaching methods

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Method N Df | Mean | STD. | t-cal | t-crt. | p-value |
| Problem-solving 40 | 52.40 | 18.08 |  |  |  |
| 78  Guided-discovery 40 |  |  | 2.79 | 1.99 | 0.013 |
| 56.75 | 17.97 | |  |  |

Source: Field Work, 2016

The analysis in Table 12 revealed that the calculated table value was 2.79 and the table value was 1.99. The p-value obtained was 0.013, which was significant at 0.05. This was deduced from the observed calculated t-value of 2.79 compared to its critical value of 1.99 and an observed level of 0.013 (P < 0.05). By this development, the null hypothesis that there is no significant difference in the effect of problem-solving teaching method and guided-discovery teaching method on performance of senior secondary school students in financial accounting was therefore rejected.

**Null Hypothesis Four:** There is no significant difference in the effects of problem- solving and guided-discovery teaching methods on performance of male senior secondary school students in financial accounting

In testing null hypothesis four, post-test scores of male students taught using problem-solving teaching method and those taught using guided-discovery teaching method were analysed using T-test at 0.05 level of significant as shown in Table 13

## Table 13: t-test Analysis showing difference on performance of male senior secondary school students taught financial accounting using problem- solving and guided-discovery teaching methods

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Method N Df | Mean | STD. | t-cal | t-crti. | p-value |
| Male Problem-solving 22 | 58.59 | 18.14 |  |  |  |
| 42  Male Guided Discovery 22 |  |  | -.699 | 2.01 | 0.488 |
| 62.41 | 18.08 | |  |  |

Source: Field Work, 2016

The analysis in Table 13 revealed that the t.cal was -.699 and the critical table value were 2.01. The p-value obtained was 0.288, which was significant at 0.05. The

null hypothesis that there is no significant difference in the effects of Problem-solving and guided-discovery teaching methods on performance of male senior secondary school students in financial accounting was therefore retained. This is because the observed calculated t-value (-.699) which was less than the critical table value (2.01) and the observed level of significant (0.488) was greater than the alpha value of 0.05. These observations provide sufficient evidence to retain the null hypothesis.

**Null Hypothesis Five:** There is no significant difference in the effects of problem- solving and guided-discovery teaching methods on performance of female senior secondary school students in financial accounting

This hypothesis was tested with the performance of female students that participated in the two different teaching methods assessed in the experiment. Two sample t-test statistics was used to determine the difference between the effects of problem-solving and guided-discovery teaching methods on performances of female students. The result of the test was summarized in Table 14.

## Table 14: t-test Analysis showing difference on performance of female senior secondary school students taught financial accounting using problem- solving and guided-discovery teaching methods

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Method N Df | Mean | STD. | t-cal | t-crti. | p-value |
| Female Problem-solving 18 | 44.83 | 15.29 |  |  |  |
| 34  Female Guided Discovery 18 |  |  | -.969 | 2.03 | 0.339 |
| 49.83 | 15.67 | |  |  |

Source: Field Work, 2016

The analysis in Table 14 revealed that the calculated value was -.969 and the critical table value were 2.03. The p-value obtained was 0.339, which was significant at

0.05. By implication the null hypothesis that there is no significant difference in the effect of problem-solving and guided-discovery teaching methods on performance of female secondary school students in financial accounting was therefore retained. This is

because t-cal was -.969 at (p=0.339). Since the alpha value of 0.05 was less than p-value of 0.339 the null hypothesis was retained.

## Summary of Major Findings

The study established that:

1. Problem-solving teaching method had significant effect on performance of senior secondary school students in financial accounting in Kwara state, Nigeria with r-cal of 0.775 at (p=0.000). That is, students exposed to problem-solving teaching method performed better with mean difference of 11.65 than those taught using conventional direct teaching method.
2. Guided-discovery teaching method had significant effect on performance of senior secondary school students in financial accounting in Kwara state with r-cal of 0.640 at (p=0.000). This is because students exposed to guided-discovery teaching method performed relatively high with 16.00 mean differences than those taught using conventional direct teaching method.
3. There was significant difference in the performance of students taught financial accounting using problem-solving and guided-discovery teaching methods with t-cal of 2.79 at (p=0.013). That is, guided-discovery teaching method had more significant positive effect than problem-solving method of teaching on performance of senior secondary school students in financial accounting with mean differences 4.35.
4. There was no significant difference in the effect of problem-solving and guided- discovery teaching methods on performance of male students in financial accounting with r-cal of –.699 at (p=0.488). This is because male students taught financial accounting using problem-solving teaching method had closed mean performance of

58.59 as against the mean performance (62.41) of those taught financial accounting using guided-discovery teaching method.

1. There was no significant difference in the effect of problem-solving and guided- discovery teaching methods on performance of female students in financial accounting with t-cal of – .969 at (p=0.339). This is because Female students taught financial accounting using Problem-solving teaching method had closed mean performance of 44.83 as against the mean performance (49.83) of those taught using guided-discovery teaching method.

## Discussion of Findings

The study investigated the effects of problem-solving and guided-discovery teaching methods on students‟ academic performance in financial accounting in secondary schools in Kwara state, Nigeria. In order to achieve the objective of the study, the researcher used three distinct teaching methods which were problem-solving, guided- discovery and direct teaching methods (Conventional method). Five null hypotheses were tested to determine significant differences in the effects of the three methods of teaching on the performance of students in Financial Accounting at the secondary schools level.

In research question one, mean scores of 52.40 and 40.75 between the group taught financial accounting using problem-solving teaching method and those taught using conventional direct teaching method were obtained. This showed that the group taught with Problem-Solving method had a higher mean performance. Null hypothesis one further revealed that significant difference exists between the two groups. This is in line with the findings of Okoli (2011) who compared problem-solving and conventional methods that revealed a mean difference of 10.86 between the two groups and reports that Problem-Solving method has significant effect on students‟ academic performance

in financial accounting in secondary schools level. This finding is consistent with the views of Kang and Howren in Okoli (2011) who reported that research supported the premise that Lecture and memorization do not lead to long-term knowledge or the ability to apply that knowledge to new situations. That was why Snyder and Snyder (2008) affirmed that problem-solving activities promote critical thinking and problem-solving skills; active participation in the learning process including self direction, identification of own learning needs, team work, creative discussion and learning from peers and the integration as well as synthesis of a variety of knowledge.

Answer to research question two revealed than the mean performance for the two groups compared were 56.75 and 40.75 which showed that students taught with guided- discovery method of teaching had a higher mean performance over those taught with conventional direct teaching method. Test of null hypothesis two revealed that there was a significant difference between the performances of students using the two methods. This agrees with Ngozi (2013) who concluded that guided-discovery teaching method is an effective method of enhancing academic achievement and assisting students to discover certain facts and answer to a problem at hand. This finding is also in line with Luntungan (2012), Igboegwu (2012) and Moradeyo (2015) who reports that guided- discovery teaching method had significant effect on students‟ academic performance in financial accounting. Igboegwu (2012) further described the guided-discovery method as the method of teaching that make teaching activities enjoyable, accessible and promote students language and communication skills which facilitate better understanding of the concept for students.

In research question three, the mean performance between the two groups compared stood at 52.40 and 56.75 with mean difference of 4.35 which showed that students taught with guided-discovery method performed a bit higher than those taught

with Problem-solving method. The slightly higher performance of the group taught using guided-discovery method may be as a result of what Igboegwu (2012) observed, that guided-discovery method as the method of teaching that make teaching activities enjoyable, accessible and promote students language and communication skills which facilitate better understanding of the concept for students. Based on the view of Awoniyi (2007), guided-discovery method provides for better understanding as the students are actively engaged in the process of acquiring knowledge instead of being a passive listener. This finding disagreed with the report of Nnaobi in Igboegwu (2012) who argued that there is no best method of teaching. The results here showed that the use of guided-discovery and problem-solving method is significantly better than the use of conventional direct teaching method. However, the results of the tested null hypothesis three on the comparison between the performances of students taught using problem- solving and guided-discovery methods showed there was a significant difference between the two groups of students. This implies that guided discovery method of teaching has more significant effects on students‟ academic performance in financial accounting in secondary schools level.

In research question four, there were mean performance of 58.59 and 62.41 between the secondary school male students taught financial accounting using problem- solving and guided –discovery teaching methods, which indicated that the male student taught with guided-discovery had a higher mean performance. In the test of hypothesis four, male students taught financial accounting using guided-discovery teaching method and problem-solving teaching method were compared with the aid of two sample t-test statistics. The result revealed that male students taught with guided-discovery teaching method performed better than those taught using problem-solving teaching method. This is supported by Moradeyo (2015) who pointed out that male student performed better

with the use of guided-discovery teaching method. The findings also agreed with that of Idoko (2015) who remarked that guided-discovery teaching method had more significant effect on male students‟ performance in financial accounting than conventional teaching method.

Answer to research question five revealed that the mean performance of 44.83 and 49.83 between the secondary school female students taught financial accounting using problem-solving and guided–discovery teaching methods, which revealed that the female student taught with guided-discovery relatively performed better than those taught with problem-solving teaching methods. Hypothesis five tested showed the performance of female students who were taught with guided-discovery teaching method and female students taught with problem-solving teaching methods. The result of the test conducted with two sample t-test statistic revealed that female students taught financial accounting with guided-discovery teaching method performed significantly better than those taught using problem-solving teaching method. The findings here agrees with that of Akinbobola and Afolabi (2009) who conducted a study on the effects of guided- discovery approach, demonstration and expository teaching methods on students‟ cognitive achievements in Nigerian senior secondary school Physics in Ife Central Local Government Area of Osun State and the result of the study revealed that guided- discovery approach was the most effective in facilitating female students‟ achievement in Physics. The study also agreed with that of Idoko (2015) who affirmed that guided- discovery method of teaching had more significant effects on female students‟ performance in financial accounting. Also, Okoli and Egbunonu (2012) observed that academic achievement involves observable and measurable performance of students that take place in the presence of a standard for measuring academic excellence. It is

generally observed that teachers can enhance students‟ academic performance by employing different teaching method.

# CHAPTER FIVE

**SUMMARY, CONCLUSION AND RECOMMENDATION**

This chapter is presented under the following sub-headings:-

* 1. Summary
  2. Contribution to Knowledge
  3. Conclusion
  4. Recommendations
  5. Suggestion for Further Study

## Summary

The study is titled “effects of problem-solving and guided-discovery methods on students‟ academic performance in financial accounting in secondary schools in Kwara state, Nigeria”. The major objective of the study was to determine the effects of using problem-solving and guided-discovery methods on secondary schools students‟ academic performance in financial accounting in Kwara state. The study aimed at achieving four specific objectives from which four research questions and four null hypotheses were postulated. The research questions and null hypotheses were formulated so as to provide statistical validity to various solutions proffered for the objectives of the study.

The research design for the study was quasi experimental design. The population for the study comprised of 19,238, SS II commercial students both male and female from three hundred and fourty-seven public senior secondary schools in sixteen local government areas of Kwara state taking financial accounting as at the time of this study. Three schools were selected from the entire schools offering financial accounting in the state using purposive sampling technique. From the three schools selected, a total number of one hundred and twenty students both male and female were selected as

sample size using balloting method and randomly assigned to both experimental groups and control group, that is, fourty students for each group. The instrument used for data collection was FAAT I and II. Data collected from the students pre-test and post-test scores were recorded and the post-test scores were statistically analyzed. The five null hypotheses were tested at 0.05 level of significance. Null hypotheses one and two were tested using Pearson product moment correlation coefficient and three, four and five were tested using t-test statistical test. From the analysis, hypotheses one, two and three were rejected which means significant differences exists between the independent variables and hypotheses four and five were retained despite there was difference between the mean performance of the of male and female students taught financial accounting using problem-solving and guided-discovery teaching methods.

Finally, the findings from the study revealed that:

* + 1. Students taught using problem-solving method performed better with 11.65 mean differences than those taught using conventional direct teaching method.
    2. Students taught using guided-discovery method performed better with 16.00 mean differences than those taught using conventional direct teaching method.
    3. Students taught using guided-discovery method performed better with 4.35 mean differences than those taught using Problem-Solving method.
    4. Male students taught using guided-discovery teaching method performed relatively better than those taught using problem solving with mean difference of 3.81.
    5. Female students taught using guided-discovery teaching method performed better with 5.00 mean differences than those taught using problem-solving teaching method.

## Contribution to knowledge

Going by the findings of the study, the following contributions to knowledge were established:

1. Problem-solving teaching method is a strong method of instruction in teaching financial accounting at senior secondary school level.
2. Guided-discovery teaching method is equally a better method of teaching financial accounting at secondary school level.
3. Guided-discovery teaching method is more suitable for effective instruction of financial accounting at secondary school level.

## Conclusion

Going by the findings of this study, the results revealed that problem-solving and guided-discovery teaching methods are appropriate methods to be used in teaching financial accounting in senior secondary schools. It is also observed that problem-solving and guided-discovery methods facilitates better understanding which enhanced students‟ academic performance in financial accounting in secondary schools. Finally, it could be concluded that students taught financial accounting with the use of problem-solving and guided-discovery methods are capable of earning good grade which will enable them to acquire job skills, self-reliance, further their studies and gainful of employments.

## Recommendations

The following recommendations are put forward based on the findings from this

study:

1. Financial accounting teachers should intensify efforts in the use guided-discovery teaching method in teaching Financial Accounting in Senior Secondary Schools, in Kwara State.
2. Students should be adequately involved in the teaching and learning process of Financial Accounting, hence the need for the use of problem-solving and guided- discovery teaching methods in Senior Secondary Schools, in Kwara State.
3. Problem-Solving teaching method should be used to teach financial accounting in Secondary Schools in Kwara State.
4. Whenever possible, students should be taught financial accounting using Guided- discovery teaching method than Problem-solving teaching method.

## 3.5 Suggestion for Further Studies

1. The researcher wishes to suggest that further studies be carried out in similar topic in other states of the federation for the purpose of generalization
2. Other methods of teaching financial accounting should be studied in order to determine their effectiveness on students‟ academic performance.

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## APPENDIX II – Pre-test

INTRODUCTION: Answer all question in sections „A‟ and „B‟

Section A

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | Gender |  | |
|  | Male | [ | ] |
|  | Female | [ | ] |

2. Age (in years) 13 – 15 [ ]

16 – 18 [ ]

19 – 21 [ ]

# SECTION B

## Objectives Questions

Instruction: Indicate the answer by ticking the correct option

1. The distinguishing between a two-column and three column cash book is?
   1. Discount column
   2. Cash column
   3. Bank column
   4. Ledger folio.
2. Which of the following is not a characteristic of a Trial Balance?
   1. It has columns for debit and credit balances
   2. Total of debit balance equals total of credit balance
   3. It is a statement
   4. It is an account
3. The lodgement of business cash into the business bank account is an example of?
   1. Contra entry
   2. Bank reconciliation
   3. Self-balancing ledger
   4. Reversal entry
4. The capital of a sole trader changes as a result of?
   1. Paying wages by cash
   2. Equipment purchased by cheque
   3. Drawings by cheque
   4. Purchases on credit
5. Which of the following is not a book of original entry?
   1. Cash book
   2. Purchases ledger
   3. Returns outwards journal
   4. General journal.
6. The excess of current assets over current liabilities is?
   1. Fixed capital
   2. Registered capital
   3. Nominal capital
   4. Working capital

Use the following information to answer questions **7-10**

|  |  |  |  |
| --- | --- | --- | --- |
|  | ₦ |  | ₦ |
| Opening Stock | 1,200 | Sales | 29,000 |
| Purchases | ? | Less returns | 500 |
| Add: Carriage Inwards | 300 |  | ? |

? 28,500

Less: Returns Outwards 1,570

?

Less: Closing Stock 2,220 Gross profit (25% of sales) ?

28,500 28,500

1. What is the cost of goods sold?
   1. ₦ 19,805
   2. ₦ 21,075
   3. ₦ 21,375
   4. ₦ 21,750
2. The cost of goods available for sale is?
   1. ₦ 21,375
   2. ₦ 22,095
   3. ₦ 22,395
   4. ₦ 23,595
3. What is the cost of goods purchased?
   1. ₦ 22,095
   2. ₦ 22,395
   3. ₦ 23,765
   4. ₦ 23,665
4. The goods profit is?
   1. ₦ 7,125
   2. ₦ 7,250
   3. ₦ 7,425
   4. ₦ 7,625
5. Carriage outwards is charged to the?
   1. Debit side of profit and loss account
   2. Credit side of profit and loss account
   3. Credit side of trading account
   4. Debit side of profit and loss appropriation account
6. Where a proprietor withdraws cash from bank for office use, the entries would be?
   1. Credit cash account, debit bank account
   2. Debit cash account, credit bank account
   3. Debit office account, credit bank account
   4. Debit drawings account, credit bank account
7. When buyer returns damage goods to the seller, the buyer receives a?
   1. Proforma invoice
   2. Credit note
   3. Debit note
   4. Goods return note
8. A fund established for the payment of minor expenses is?
   1. Cash discount
   2. Cash flow
   3. Accumulated fund
   4. Petty cash
9. can be defined as the yearly reduction in value of a fixed asset as a result of

usage?

* 1. Depreciation
  2. Depreciation
  3. Depreciator
  4. Appreciation

1. One of the followings is not factors to be considered in calculating depreciation?
   1. The selling cost
   2. The historical cost
   3. The residual value
   4. The depreciation rate
2. The followings are examples of depreciable assets except?
   1. Debtors
   2. Land
   3. Building
   4. Motor vehicle
3. The basic aim of preparing manufacturing account is to ascertain… ?
   1. Gross profit
   2. Gross loss
   3. Cost of production
   4. Cost of selling
4. The total cost of materials which have been used in the production of goods manufactured is called ?
   1. Cost of raw materials available to use
   2. Cost of raw materials consumed
   3. Cost of raw materials returns
   4. Cost of raw materials sold
5. Manufacturing account is sub-divided into… parts?

(a) 5

(b) 2

(c) 3

(d) 4

## APPENDIX III – Pre-test Marking Scheme Each question carries five (5) marks

1. A – Discount column
2. D – It is an account
3. B – Bank reconciliation
4. D – Purchases on credit
5. B – Purchases ledger
6. D – Working capital
7. C - ₦ 21,375
8. D - ₦ 23,595
9. D - ₦ 23,665
10. A - ₦ 7,125
11. A – Debit side of profit and loss account
12. B – Debit cash account, credit bank account
13. C – Debit note
14. D – Petty cash
15. A – Depreciation
16. A – The selling cost
17. A – Debtors
18. C – Cost of production
19. B – Cost of raw materials consumed
20. C – 3

## APPENDIX IV- Post-test

THEORY QUESTIONS

Instruction: Answer all questions in this section and show all your workings. Question 1 (a): Define Partnership Accounts?

Question 1 (b): Enumerate Partnership agreement (Deed) of partnership Act 1890?

Question 2: Ahmed, Sheu and Wale are in partnership sharing profits and losses in ratio 3:2:1 respectively. Interest is charged on drawings at the rate of 10% per annum and credited at the same rate in respect of capital account balances.

Sheu is to be credited with a salary of ₦ 2,000 per annum. In the year ended 31st December 2014, the net profit of the firm was ₦ 50,400. The partner‟s drawings of Ahmed ₦ 3,000; Sheu ₦ 7,200 and Wale ₦ 4,800 were taken in two equal installments by the partners on 1st April 2014 and 1st October 2014.

The balances on the partners‟ capital accounts at 31st December 2013 were as follows (all credited balances):

|  |  |  |
| --- | --- | --- |
|  | Capital Account | Current Account |
| ₦ | ₦ |
| Ahmed | 30,000 | 750 |
| Sheu | 20,000 | 1,340 |
| Wale | 16,000 | 220 |

## You are required to:

* 1. Prepare the firm‟s profit and loss appropriation account for the year ended 31st December, 2014; and
  2. Partners‟ current accounts as at 31st December, 2014

## APPENDIX V – Post-test Marking Scheme

**Each correct entry carries one and half (1.5) marks 1.5 × 60 = 90 and plus 10 marks of question one making total of 100 marks (100%)**

**Question 1 (a**): Partnership is defined in Partnership Act 1890 as “the relationship which subsists between persons carrying on business in common with a view of profit”.

**Question 1 (b):** The formal agreement drawn up to regulate the conduct of a partnership business is known as a partnership deed. The partnership deed covers the following points:

1. The amount of capital to be contributed by each partner
2. Whether the capital accounts are to be fixed, drawings and profits being adjusted on current accounts, or whether the capital accounts are to be fluctuating, drawings and profits being adjusted on capital accounts
3. The ratio in which profits/losses are to be shared among the partners
4. The rate at which interest is to be allowed on partner‟s capital
5. The rate at which interest is to be charged on partner‟s drawings
6. The amount of salary receivable by partners
7. The rate of interest to be allowed on partner‟s loan
8. Whether current accounts, if any, are to bear interest and, if so, at what rate
9. The method of calculating goodwill in the event of death, retirement or admission of partners
10. The method of treating the premiums on life insurance policies, if any, and how the proceeds of the policies are to be shared amongst the partners.

**Question 2:**

**Ahmed, Sheu and Wale**

* 1. **Profit and Loss Appropriation Account for the year ended 31st**

**December, 2014**

|  |  |
| --- | --- |
| ₦ ₦  Salary- Sheu  2,000  Interest on Capital:  Ahmed (10% × 30,000) 3,000  Sheu (10% × 20,000) 2,000  Wale (10% × 16,000) 1,600  6,600  Share of profits:  Ahmed (3/6 × 42,550) 21,275  Sheu (2/6 × 42,550) 14,183  Wale (1/6 × 42,550) 7,092  42,550  51,150 | ₦ ₦  Net profit 50,400  Interest on drawings:  Ahmed 150  Sheu 360  Wale 240  750  51,150 |

* 1. **Partners’ Capital Accounts**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 31/12/14 Bal. c/d | **Ahmed** | **Sheu** | **Wale** | 1/1/14 Bal. b/d  1/1/15 Bal. b/d | **Ahmed** | **Sheu** | **Wale** |
| ₦  30,000 | ₦  20,000 | ₦  16,000 | ₦  30,000  30,000 | ₦  20,000  20,000 | ₦  16,000  16,000 |

* 1. **Partners’ Current Accounts**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Ahmed | Sheu | Wale |  | Ahmed | Sheu | Wale |
|  | ₦ | ₦ | ₦ |  | ₦ | ₦ | ₦ |
| Drawings | 3,000 | 7,200 | 4,800 | 1/1/ Bal. b/d | 750 | 1,340 | 220 |
| Int. on | 150 | 360 | 240 | Salary | \_ | 2,000 | \_ |
| drawings | 21,875 | 11,963 | 3,872 | Int. on | 3,000 | 2,000 | 1,600 |
| 31/12/14 Bal |  |  |  | Capital | 21,275 | 14,183 | 7,092 |
| c/d | 25,025 | 19,523 | 8,912 | Share of | 25,025 | 19,523 | 8,912 |
|  |  |  |  | Profit | 21,875 | 11,963 | 3,872 |
|  |  |  |  | 1/1/15 Bal. |  |  |  |
|  |  |  |  | b/d |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Workings:** |  | |
| Calculation of Interest on Drawings |
| Ahmed: |  | ₦ |
| 1/04/14 – 31/12/14 : ₦ 1,500 × 10% × 9/12 | = | 112.50 |
| 1/10/14 – 31/12/14 : ₦ 1,500 × 10% × 3/12 | = | 37.50 |
|  |  | 150.00 |
| Sheu: |  | ₦ |
| 1/04/14 – 31/12/14 : ₦ 3,600 × 10% × 9/12 | = | 270.00 |
| 1/10/14 – 31/12/14 : ₦ 3,600 × 10% × 3/12 | = | 90.00 |
| Wale: |  | 360.00  ₦ |
| 1/04/14 – 31/12/14 : ₦ 2,400 × 10% × 9/12 | = | 180.00 |
| 1/10/14 – 31/12/14 : ₦ 2,400 × 10% × 3/12 | = | 60.00 |
|  |  | 240.00 |

# APPENDIX VI

## Lesson Plan (Problem-Solving Method) Week One

Name of teacher: Rafiu Olawale Yusuf

Reg. Number: P13EDVE8036

Subject Combination: Business Education

Name of School: Okelele Secondary School, Ilorin

Class: S. S. II Commercial

Average Age: 16 years.

Gender: Mixed school

Subject: Financial Accounting

Topic: Concepts and Partnership Deed

Duration: ninety minutes (double period)

Date: 10/02/2016

General Objective: To teach the students the concepts and partnership agreement (deed).

Behavioural Objectives: At the end of the lesson, students should be able to:

* + 1. Define Partnership
    2. Enumerate Partnership agreement (deed)
    3. Explain partnership agreement (deed)

Instructional Methods: Problem-solving Teaching Method

Instructional Material: Chalkboard and card board paper showing the list of partnership agreement (deed).

Previous knowledge: Students have been taught trading, profit and loss account of a sole trader in S.S. one

Introduction: The teacher introduces the lesson by asking question based on students‟ previous knowledge on final account of a manufacturing account.

Presentation: The lesson is presented in steps:

|  |  |  |
| --- | --- | --- |
| **Approach** | **Teacher’s Activities** | **Students’ Activities** |
| **Step I- Introduction** | The teacher introduces the lesson by asking question based on previous knowledge of the students on final account of manufacturing account as thus: 1. manufacturing account is divided to how many sub-section? 2. Name  them? | The student listens and respond to teacher tasks as thus: Manufacturing Account is divided into three important sub-sections namely: i. manufacturing section. ii. Manufacturing trading, profit and loss section and, iii. Balance  sheet section |
| **Step II** | The teacher goes further by asking questions relating to topic of the day as thus: i. is it possible for two or more people to run a particular business together? ii. If Yes, what name can we called such business? iii. What did they need for smooth running of the business? Finally, what is partnership account? Teacher commends the students‟ effort by given the definition as follows: it is simply defined in partnership Act of 1890 as “the relationship which subsists between persons carrying on business in common with a view of  profit”. | The students answer the teachers‟ question by saying YES. The students‟ try to provide answer to question two by giving their different opinion as follows: joint- business, cooperative business and finally arrived at accurate answer which is “partnership business”. iii. Proper financial record.  Students try their best to define partnership account as thus: it is the business carried out by two or three people with keeping proper record to make profit. |
| **Step III** | The teacher proceeds on the lesson by asking more question as thus: i. what do partners need to keep the business going to avoid problem between the partners? Since, the correct answer is partnership agreement. What and what  do this agreement will | The student takes active part in the discussion and gives their opinion as follows: i. rules and regulation. ii. Legal backing and eventually gives the rights answer by saying “partnership Agreement”. students mention the  following likely agreement: |

|  |  |  |
| --- | --- | --- |
|  | based upon? Teacher finally enumerates the partnership agreement (deed) as follows: i. the name and address of the business, ii. The amount of capital to be contributed by each partner,  iii. The ratio in which profits/losses are to be shared among the partners,  iii. The rate at which interest is to be charged on partner‟s drawings, iv. The rate at which interest is to be allowed on partner‟s capital, v. the amount of salary receivable by  partners e.t.c | name of the business, location of the business, contribution of each partner either in cash or in kind and how to share the business benefits or problem |
| **Evaluation** | The teacher evaluates the students with the following questions:   1. What is partnership account? 2. List partnership deed you have   taught? | The students respond to the teacher‟s question accordingly and make lesson evaluation a student‟s/teachers centered activities |
| **Summary and Conclusion** | The teacher briefly goes over the lesson after giving out chalkboard summary and also corrects some points discovered during his inspection of the students and also concludes the lesson by appreciating the cooperation of the students and gives them assignment as follows:  Enumerates five (5)  importance of partnership account? | The students also appreciate the efforts of the teacher and take note of the assignment. |

# APPENDIX VII

## Lesson Plan (Guided-Discovery Method) Week One

Name of teacher: Rafiu Olawale Yusuf

Reg. Number: P13EDVE8036

Subject Combination: Business Education

Name of School: Ilorin-South Senior Secondary School, Ilorin

Class: S. S. II Commercial

Average Age: 15 years.

Gender: Mixed school

Subject: Financial Accounting

Topic: Concepts and Partnership Deed

Duration: ninety minutes (double period)

Date: 8/02/2016

General Objective: To teach the students the concepts and partnership agreement (deed).

Behavioural Objectives: At the end of the lesson, students should be able to:

* + 1. Define Partnership
    2. Enumerate Partnership agreement (deed)
    3. Explain partnership agreement (deed)

Instructional Methods: Guided-discovery Teaching Method

Instructional Material: Chalkboard and card board paper showing the list of partnership agreement (deed).

Previous knowledge: Students have been taught trading, profit and loss account of a sole trader in S.S. one

Introduction: The teacher introduces the lesson by guiding the students in revising their previous knowledge on final account of a manufacturing concern and also helping the student to discover certain answer to some questions.

Presentation: The lesson is presented in steps:

|  |  |  |
| --- | --- | --- |
| **Approach** | **Teacher’s Activities** | **Students’ Activities** |
| **Step I- Introduction** | The teacher introduces the lesson by guiding the students in revising their previous knowledge based on final account of manufacturing concern and also helps the students in discovering certain facts to some tasks as thus: i. final account of a manufacturing concern divided into three important sub-sections.  Now, name them? | The students‟ listens to the teacher introduction and take active parts by enumerating the sub- sections of manufacturing concern as thus: i. manufacturing section, ii. Manufacturing trading, profit and loss section and,  iii. Balance sheet section. |
| **Step II** | The teacher goes further by asking likely questions to introduce topic of the day and at the same time assists the students to discover right answer to the question as thus: It is possible for two or more people to come together and run a particular business with view to business expansion. Based on this explanation, what is the name of such a business? Teacher finally helps the students out by saying “partnership business”. Now, what is partnership account? The teacher finally explains the meaning as thus: partnership account is defined in partnership Act of 1890 as “the relationship which subsists between persons carrying on business in common with a  view of profit”. | The student takes active part in the discussion and activities in the classroom and giving answer to the teacher question as follows:  i. group of business, ii. Joint-venture business,  cooperative business. Students respond as thus: it is a business run between two or more people with view to profit. |
| **Step III** | The teacher guides and | The student takes active part |

|  |  |  |
| --- | --- | --- |
|  | helps the students in enumerating the partnership agreement (deed) as follows: i. the amount of capital to be contributed by each partner, ii. The ratio in which profits/losses are to be shared among the partners, iii. The rate at which interest is to be charged on partner‟s drawings, iv. The rate at which interest is to be allowed on partner‟s capital, v. the amount of salary receivable by  partners e.t.c | in the discussion and ask question where necessary. The students also write the points down in their lesson note under the teacher supervision and guides |
| **Evaluation** | The teacher evaluates by asking the following questions:   1. What is partnership account? 2. List partnership deed you have   taught | The students respond to the teacher‟s question accordingly and make lesson evaluation a student‟s/teachers centered activities |
| **Summary and Conclusion** | The teacher briefly goes over the lesson and corrects point discovered during his inspection of the students and also concludes the lesson by appreciating the cooperation of the students and gives them assignment as follows:  Write five (5) importance of  partnership Account? | The students also appreciate the efforts of the teacher based on the proper guides the teacher gave them in discovering certain facts to solve problem at hand and take note of the assignment. |

# APPENDIX VIII

## Lesson Plan (Direct Teaching Method) Week One

Name of Teacher: Rafiu Olawale Yusuf

Teacher Registration Number: P13EDVE8036

Subject Combination Business Education

School: Ero-Omo Senior Secondary School, Ilorin

Class: S. S. S. II

Average Age: 14 years.

Subject: Financial Accounting

Topic: Partnership Accounts

Methods of teaching: Direct Teaching Method

Duration: Ninety-minutes (double periods)

Date: 11/02/2016

General Objective: To teach the students the concepts and partnership agreement (deed) Act 1890

Behavioural objectives: At the end of this lesson, students should be able to:

1. Define partnership accounts
2. Enumerate partnership agreement (deed) Act 1890
3. Explain partnership agreement (deed) Act 1890

Instructional material: Chalkboard and card board paper showing the list of partnership agreement (deed).

Previous knowledge: Students have been taught trading, profit and loss account of a sole trader in S.S. One

Introduction: The teacher introduces the lesson by reversing the previous knowledge of the students on final account of a manufacturing concern and relates it to partnership account

Presentation: The lesson is presented in steps

Step 1: The teacher defines Partnership account as thus: Partnership is defined in Partnership Act 1890 as “the relationship which subsists between persons carrying on business in common with a view of profit”.

Step 2: The teacher goes further by enumerating and explaining partnership agreement (deed) Act of 1890 as follows:

1. The rate at which interest is to be allowed on partner‟s capital
2. The rate at which interest is to be charged on partner‟s drawings
3. The amount of salary receivable by partners
4. The rate of interest to be allowed on partner‟s loan
5. Whether current accounts, if any, are to bear interest and, if so, at what rate

Evaluation: The teacher evaluates the students with the following question in order to test the level of students‟ academic achievement:

1. What is partnership account?
2. Enumerate Partnership Agreement (Deed)?
3. Explain Partnership Agreement (Deed)?

Summary: The teacher briefly goes over the lesson stressing out the important point from the lesson

Conclusion: The teacher concludes the lesson by giving the students assignments on the topic

Assignment: list five (5) importance of partnership Account?

# APPENDIX IX

## Lesson Plan (Problem-Solving Method) Week Two

Name of teacher: Rafiu Olawale Yusuf

Reg. Number: P13EDVE8036

Subject Combination: Business Education

Name of School: Okelele Secondary School, Ilorin

Class: S. S. II Commercial

Average Age: 16 years.

Gender: Mixed school

Subject: Financial Accounting

Topic: Preparation of partner‟s profit and loss appropriation account

Duration: ninety minutes (double period)

Date: 17/02/2016

General Objective: To teach the students how to prepare partner‟s profit and loss appropriation accounts

Behavioural Objectives: At the end of the lesson, students should be able to:

* 1. Identify and explain 5 profit and loss appropriation account items.
  2. Prepare and determine partners‟ share of profit or loss of profit and loss appropriation account

Instructional Methods: Problem-solving Method

Instructional Material: Text book and a card board showing the format of profit and loss appropriation account.

Previous knowledge: Students have been taught trading, profit and loss account of a sole trader in S.S. one

Presentation: The lesson is presented in steps:

**Presentation**

|  |  |  |
| --- | --- | --- |
| **Approach** | **Teacher’s Activities** | **Students’ Activities** |
| **Step I- Introduction** | The teacher introduces the lesson by displaying the card board on the chalk board and ask the students to provide explanation on the terminologies of partnership profit and loss appropriation account displayed on card board paper based on their understanding as follows:   1. Interest on capital. 2. Interest on drawing. 3. Share of profit. 4. Salary 5. Interest on loan etc. after that, teacher further give more explanations on the   terminologies. | The student responds to the teacher‟s question and identifies the various items of partnership profit and loss appropriation account before giving more explanation on the terminologies based on the critical thinking |
| **Step II** | The teacher goes further by asking the students to draw the format of partnership profit and loss appropriation account and outlines the items of debit and credit side of the account after teachers‟ explanation on how to prepare the account. Teacher buttress the efforts of the by demonstrating to the students on how the account can be prepared. With detailed illustration, the teacher explains to the students on how to prepare and determine the partner‟s share of profit or loss from partners‟ profit and loss  appropriation account. | The students respond to teacher question and T- table of the account and try to identify the entries of the account based on teacher explanations.  The students ask question where necessary and demonstrate the preparation of profit and loss appropriation account. |
| **Step III- Evaluation** | The teacher evaluates the  student by asking them the | The students open the page  of the exercise given by the |

|  |  |  |
| --- | --- | --- |
|  | following questions:   1. Mention 4 items of profit and loss appropriation account. 2. Prepare profit and loss appropriation account on page 150-   151 illustration 8.2 from financial accounting made simple by Robert O.  Igben (2009) | teacher and answer the question in their exercise note book. |
| **Summary and Conclusion** | The teacher briefly goes over the lesson. He identifies and corrects points discovered during his inspection of  students note. Teacher | This is students/teacher‟s activities as every student participates in the review of the lesson. The students takes down the assignment  question |
|  | concludes the lesson with the |  |
|  | following assignment: Tunde, |  |
|  | Bola and Wale are in |  |
|  | partnership sharing profits |  |
|  | and losses in ratio 3:2:1 |  |
|  | respectively. Interest is |  |
|  | charged on drawings at the |  |
|  | rate of 10% per annum and |  |
|  | credited at the same rate in |  |
|  | respect of capital account |  |
|  | balances. |  |
|  | Bola is to be credited with a |  |
|  | salary of ₦ 2,000 per annum. |  |
|  | In the year ended 31st |  |
|  | December 2015, the net |  |
|  | profit of the firm was |  |
|  | ₦ 50,400. The partner‟s |  |
|  | drawings of Ahmed ₦ 3,000; |  |
|  | Bola ₦ 7,200 and Wale |  |

|  |  |  |
| --- | --- | --- |
|  | ₦ 4,800 were taken in two  equal installments by the partners on 1st April 2015 and 1st October 2015.  **You are required to:**  i. Prepare the firm‟s profit and loss appropriation account for the year ended 31st December, 2015 |  |
|  |  |  |

# APPENDIX X

## Lesson Plan (Guided-Discovery Method) Week Two

Name of teacher: Rafiu Olawale Yusuf

Reg. Number: P13EDVE8036

Subject Combination: Business Education

Name of School: Ilorin-South Senior Secondary School, Ilorin

Class: S. S. II Commercial

Average Age: 16 years.

Gender: Mixed school

Subject: Financial Accounting

Topic: Preparation of partner‟s profit and loss appropriation account

Duration: ninety minutes (double period)

Date: 15/02/2016

General Objective: To teach the students how to prepare partner‟s profit and loss appropriation accounts

Behavioural Objectives: At the end of the lesson, students should be able to:

1. Identify and explain 5 profit and loss appropriation account items.
2. Prepare and determine partners‟ share of profit or loss of profit and loss appropriation account

Instructional Methods: Guided-Discovery Method

Instructional Material: Text book and a card board showing the format of profit and loss appropriation account.

Previous knowledge: Students have been taught trading, profit

and loss account of a sole trader in S.S. one

Presentation: The lesson is presented in steps:

**Presentation**

|  |  |  |
| --- | --- | --- |
| **Approach** | **Teacher’s Activities** | **Students’ Activities** |
| **Step I- Introduction** | The teacher introduces the lesson by displaying the card board on the chalk board and guides the students to identify and explains partners‟ profit and loss appropriation account items as follows:   1. Interest on capital. 2. Interest on drawing. 3. Share of profit. 4. Salary 5. Interest on loan etc. | The student responds to the teacher instructions and provides explanation within their capacities under the teachers‟ guides on various items of partners‟ profit and loss appropriation account. |
| **Step II** | The teacher goes further by guiding the students in drawing the format of profit and loss appropriation account and demonstrates to the students how the account can be prepared. With detailed illustration, the teacher explains to the students on how to prepare and determine the partner‟s share of profit or loss of profit and loss appropriation account. | The student takes part in the discussion and activities in the classroom.  They ask question where necessary and demonstrate the preparation of profit and loss appropriation account. |
| **Step III- Evaluation** | The teacher evaluates the student by asking them the following questions:   1. Mention 4 items of profit and loss appropriation account. 2. Prepare profit and   loss appropriation | The students open the page of the exercise given by the teacher and answer the question in their exercise note book. The teacher guide the students in preparation of the account |

|  |  |  |  |
| --- | --- | --- | --- |
|  | | account on page 150-  151 illustration 8.2 from financial accounting made simple by Robert O.  Igben (2009) |  |
| **Summary Conclusion** | **and** | The teacher briefly goes over the lesson. He identifies and corrects points discovered during his inspection of  students note. Teacher | This is students/teacher‟s activities as every student participates in the review of the lesson and students take down the assignment  question. |
|  |  | concludes the lesson and gives |  |
|  |  | the following question as an |  |
|  |  | assignment: Tunde, Bola and |  |
|  |  | Wale are in partnership |  |
|  |  | sharing profits and losses in |  |
|  |  | ratio 3:2:1 respectively. |  |
|  |  | Interest is charged on |  |
|  |  | drawings at the rate of 10% |  |
|  |  | per annum and credited at |  |
|  |  | the same rate in respect of |  |
|  |  | capital account balances. |  |
|  |  | Bola is to be credited with a |  |
|  |  | salary of ₦ 2,000 per annum. |  |
|  |  | In the year ended 31st |  |
|  |  | December 2014, the net |  |
|  |  | profit of the firm was |  |
|  |  | ₦ 50,400. The partner‟s |  |
|  |  | drawings of Ahmed ₦ 3,000; |  |
|  |  | Bola ₦ 7,200 and Wale |  |
|  |  | ₦ 4,800 were taken in two |  |
|  |  | equal installments by the |  |
|  |  | partners on 1st April 2014 |  |
|  |  | and 1st October 2015. |  |

|  |  |  |
| --- | --- | --- |
|  | **You are required to:**  i. Prepare the firm‟s profit and loss appropriation account for the year ended 31st December, 2015 |  |
|  |  |  |

# APPENDIX XI

## Lesson Plan (Direct Teaching Method) Week Two

Name of Teacher: Rafiu Olawale Yusuf

Teacher Registration Number: P13EDVE8036

Subject Combination Business Education

School: Ero-Omo Senior Secondary School, Ilorin

Class: S. S. S. II

Average Age: 14 years.

Subject: Financial Accounting

Topic: Partnership Accounts

Methods of teaching: Lecture teaching method

Duration: Ninety-minutes (double periods)

Date: 18/02/2016

General Objective: To teach the students how to prepare partners‟ profit and loss appropriation account

Behavioural objectives: At the end of this lesson, students should be able to:

1. Identify and explain 5 profit and loss appropriation account items.
2. Prepare and determine partners‟ share of profit or loss of profit and loss appropriation account

Instructional material: Text book and a card board showing the format of profit and loss appropriation account.

Previous knowledge: Students have been taught trading, profit and loss account of a sole trader in S.S. One

Introduction: The teacher introduces the lesson by reversing the previous knowledge of the students on final

account of a sole trader and relates it to partnership account

Presentation: The lesson is presented in steps

Step 1: The teacher display cardboard paper to explains the formats of profit and loss appropriation account and describe item to be debited and item to be credited respectively such as partner‟s salary, interest on capital, share of profit, net

profit b/d, share of loss, interest on drawing etc.

Step 2: The teacher goes further by giving practical exercise on how to prepare profit and loss appropriation accounts

Evaluation: The teacher evaluates the students with the following question in order to test the level of students‟ academic achievement

1. Explain items of profit and loss appropriation accounts?
2. Prepare profit and loss appropriation account on page 150-151 illustration 8.2 from financial accounting made simple by Robert O. Igben

Summary: The teacher briefly goes over the lesson stressing out the important point from the lesson

# APPENDIX XII

## Lesson Plan (Problem-Solving Method) Week Three

Name of teacher: Rafiu Olawale Yusuf

Reg. Number: P13EDVE8036

Subject Combination: Business Education

Name of School: Okelele Secondary School, Ilorin

Class: S. S. II Commercial

Average Age: 16 years.

Gender: Mixed school

Subject: Financial Accounting

Topic: Preparation of partner‟s current account from profit and loss appropriation account

Duration: ninety minutes (double period)

Date: 24/02/2016

General Objective: To teach the students how to prepare partner‟s current and capital account from profit and loss appropriation accounts

Behavioural Objectives: At the end of the lesson, students should be able to:

1. Prepare and determine partners‟ current and capital account from share of profit or loss of profit and loss appropriation account

Instructional Methods: Problem-solving Method

Instructional Material: Text book and a card board showing the format of partner‟s current account

Previous knowledge: Students have been taught share of profit and loss account from partners‟ appropriation account

Presentation: The lesson is presented in steps:

**Presentation**

|  |  |  |
| --- | --- | --- |
| **Approach** | **Teacher’s Activities** | **Students’ Activities** |
| **Step I- Introduction** | The teacher introduces the lesson by displaying the card board on the chalk board and asks students to interpret what on the card board displayed. | The student listens to the teacher question and responds by saying the various rules guiding the preparation of partners‟ current and capital account to reflect the share of profit and loss appropriation  accounts. |
| **Step II** | The teacher goes further by asking the students to draw the format of partners‟ current and capital account demonstrated on the card board paper which show to the students how the account can be prepared. With detailed illustration, the teacher explains to the students on how to prepare and determine the partner‟s current account that will reflect the shared of profit or loss of profit and loss appropriation account. | The student takes part in the discussion and activities in the classroom.  They ask question where necessary and demonstrate the preparation of partners‟ current and capital account from profit and loss appropriation account. |
| **Step III- Evaluation** | The teacher evaluates the student by asking them the following questions:   1. Mention rules guiding preparations of partners‟ current account from profit and loss   appropriation account.   1. Prepare partners‟   current on page 150-  151 illustration 8.2 | The students open the page of the exercise given by the teacher and answer the question in their exercise note book. |

|  |  |  |  |
| --- | --- | --- | --- |
|  | | from financial accounting made simple by Robert O.  Igben (2009) |  |
| **Summary** | **and** | The teacher briefly goes | The students to teacher |
| **Conclusion** |  | over the lesson. He | question and used the |
|  |  | identifies and corrects points | format to prepare partners‟ |
|  |  | discovered during his | current and capital account |
|  |  | inspection of students note | taught. This is |
|  |  | and ask the student to | students/teacher‟s activities |
|  |  | prepare partners‟ current | as every students participate |
|  |  | and capita account from | in the review of the lesson |
|  |  | previous assignment to |  |
|  |  | reflect partners‟ share of |  |
|  |  | profit or loss |  |
|  | |  |  |

# APPENDIX XIII

## Lesson Plan (Guided-Discovery Method) Week Three

Name of teacher: Rafiu Olawale Yusuf

Reg. Number: P13EDVE8036

Subject Combination: Business Education

Name of School: Ilorin-South Senior Secondary School, Ilorin

Class: S. S. II Commercial

Average Age: 16 years.

Gender: Mixed school

Subject: Financial Accounting

Topic: Preparation of partner‟s current account from profit and loss appropriation account

Duration: ninety minutes (double period)

Date: 22/02/2016

General Objective: To teach the students how to prepare partner‟s current account from profit and loss appropriation accounts

Behavioural Objectives: At the end of the lesson, students should be able to:

1. Prepare and determine partners‟ current account from share of profit or loss of profit and loss appropriation account

Instructional Methods: Guided-Discovery Method

Instructional Material: Text book and a card board showing the format of partner‟s current account

Previous knowledge: Students have been taught share of profit and loss account from partners‟ appropriation account

Presentation: The lesson is presented in steps:

**Presentation**

|  |  |  |
| --- | --- | --- |
| **Approach** | **Teacher’s Activities** | **Students’ Activities** |
| **Step I- Introduction** | The teacher guides the student and introduces the lesson by displaying the card board on the chalk board showing the format of partner‟s current and capital account in partnership  account | The student listens to the teacher and identifies the various rules guiding the preparation of partners‟ current and capital account to reflect share of profit and loss appropriation accounts  under the teachers‟ guides. |
| **Step II** | The teacher goes further guides the students in drawing the format of partners‟ current and capital account and demonstrates to the students how the account can be prepared. With detailed illustration, the teacher explains to the students on how to prepare and determine the partner‟s current account that will reflect the shared of profit or loss of profit and loss appropriation account. | The student takes part in the discussion and activities in the classroom.  They ask question where necessary and demonstrate the preparation of partners‟ current account from profit and loss appropriation account. |
| **Step III- Evaluation** | The teacher evaluates the student by asking them the following questions:   1. Mention rules guiding preparations of partners‟ current account from profit and loss   appropriation account.   1. Prepare partners‟ current on page 150-   151 illustration 8.2  from financial | The students open the page of the exercise given by the teacher and answer the question in their exercise note book with teacher guides. |

|  |  |  |
| --- | --- | --- |
|  | accounting made simple by Robert O.  Igben (2009) |  |
| **Summary and Conclusion** | The teacher briefly goes over the lesson. He identifies and corrects points discovered during his inspection of students note and guides the student in preparing partners‟ current and capital account to reflect the partners‟ share of profit or loss from the  previous assignment. | The students follow the teacher guides to prepare partners‟ current and capital account to reflect share of profit and loss of the previous assignment. This is students/teacher‟s activities as every students participate in the review of the lesson |
|  |  |  |

# APPENDIX XIV

## Lesson Plan (Direct Teaching Method) Week Three

Name of Teacher: Rafiu Olawale Yusuf

Teacher Registration Number: P13EDVE8036

Subject Combination Business Education

School: Ero-Omo Senior Secondary School, Ilorin

Class: S. S. S. II

Average Age: 14 years.

Subject: Financial Accounting

Topic: Partnership Accounts

Methods of teaching: Direct teaching method

Duration: Ninety-minutes (double periods)

Date: 25/02/2016

General Objective: To teach the students how to prepare partners‟ current account to reflect share of profits and losses

Behavioural objectives: At the end of this lesson, students should be able to:

1. Identify and explain the rules guiding the preparation of current account to reflect share of profits and losses.
2. Prepare and determine partners‟ current account to reflect share of profits or losses

Instructional material: Text book and a card board showing the format of partner‟s current account.

Previous knowledge: Students have been taught trading, profit and loss account of a sole trader in S.S. One

Introduction: The teacher introduces the lesson by reversing the previous knowledge of the students on final account of a sole trader and relates it to partnership account

Presentation: The lesson is presented in steps

Step 1: The teacher display cardboard paper to explains the formats of partners current account to reflect share of profits and losses and describe item to be debited and item to be credited

Step 2: The teacher goes further by giving practical exercise on how to prepare partner‟s current account

Evaluation: The teacher evaluates the students with the following question in order to test the level of students‟ academic achievement

1. Explain items of partner‟s current accounts?
2. Prepare partner‟s current account on page 150-151 illustration 8.2 from financial accounting made simple by Robert O. Igben

Summary: The teacher briefly goes over the lesson stressing out the important point from the lesson